

# 2014

## Town of Berryville & Clarke County Bicycle & Pedestrian Plan



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*The Town of Berryville & Clarke County Bicycle & Pedestrian Plan was completed under the Northern Shenandoah Valley Regional Commission (NSVRC) Fiscal Year 2014 Rural Transportation Work Program.*

*All recommendations are subject to approval by the Berryville Town Council and Clarke County Board of Supervisors and should be consistent with Virginia Department of Transportation (VDOT) design standards and policies.*

*Cost estimates should be regarded as planning level and preliminary in nature. Variations from actual project costs will/may result from additional factors such as design exceptions, value engineering, utility relocation, and environmental impacts. As projects move forward in the project development process, emerging details will support the refinement of these costs.*

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## Executive Summary

Bicycle and pedestrian links are vital to a community's overall health, safety and welfare. There are numerous economic development benefits in the intersection between bicycling, walkability and tourism. Bicycling and walking are an important mode of transportation, whether used separately or with other modes of transportation. Since 1991, the federal government has recognized the role of bicycle and pedestrian modes and their importance as part of an overall balanced transportation system.

The *Town of Berryville & Clarke County Bicycle and Pedestrian Plan* was prepared in response to a joint request from the Town of Berryville and Clarke County under the Northern Shenandoah Valley Regional Commission (NSVRC) Rural Transportation Work Program at no cost to either locality. The Plan provides a comprehensive overview of the existing transportation network and outlines recommendations for bicycle and pedestrian enhancements in each locality to better serve transportation, recreation and economic development objectives. Existing routes in the Town and County were identified through review of local bicycling club routes/rides (Winchester Wheelmen, Potomac Pedalers and Panhandle Pedalers) and VA bicycling guidebooks. A full summary of these materials is provided in the Appendix section of this Plan. Berryville and Clarke County identified the following priorities for developing this Plan:

- Emphasis on economic development and bicycle tourism;
- Generating a site-specific improvement program, rather than a policy plan; link with existing initiative (Safe Routes to School);
- Connectivity to local area attractions;
- Emphasis on improvements to roadway segments to link existing bicycle network;
- Identify best practices for bicycle facilities, use and promotion;

In preparation for analyzing current bicycle and pedestrian facilities applicable planning documents that were developed state-wide, regionally and locally were explored and provide the framework for future planning and prioritization efforts in Berryville and Clarke County. Challenges to bicycling in Berryville and Clarke County include the following:

- Continuity of low-volume routes broken by primary system segments without shoulders;
- Motor vehicle and bicyclist conflicts; concerns for safety of all road users;
- Need for increased coordination among local Town/County departments and club/bicycle event promoters for event planning and management; and
- Need for more multi-use trails (or shared-use paths) in local urban areas (Berryville).

The Town of Berryville cited the following as contributing factors to the overall efficiency of the pedestrian network in and around the Town:

- Relative connectivity of sidewalks to and from the downtown business district and park;
- A detailed School Travel Plan to encourage walking and biking to school; and

- Connectivity requirements of existing (and future) subdivisions to include pedestrian accommodations.

Impediments identified in the planning process to efficient pedestrian movement in the Berryville area include:

- Need for sidewalks to meet Americans with Disabilities Act (ADA) guidance;
- Lack of sidewalks in older neighborhoods (at least on one side of the street); and
- Need for a comprehensive inventory of existing sidewalk conditions.

Recommended facility improvements should be consistent with VDOT design standards and policies and Manual of Uniform Traffic Control Devices (MUTCD) Chapter 9: *Traffic Control for Bicycle Facilities*. Where feasible, roadway improvements should be made in conjunction with VDOT's existing project and paving schedule and the minimum paved shoulder width should be used depending on roadway functional classification. Additionally, coordination among staff should be undertaken where projects link with adjacent localities (City of Winchester; Frederick, Loudoun & Warren counties).

In general the following bicycle facility treatments are recommended by roadway type in Berryville and Clarke County:

#### Local/Urban

- Narrow travel lanes to reduce speed of motor vehicles (Berryville & Millwood); maintain existing narrow (10 ft.) lanes in the absence of on-street parking.
- Intersection crossing markings;
- Share the Road, Wayfinding signs;
- Multi-Use Trails

#### Rural

- Where feasible add paved shoulders (Width: 2 feet minimum; 4 feet recommended) on primary roads (US routes 17/50, 340 and 522; VA Route 7);
- Share the Road, Wayfinding signs;

Pedestrian recommendations identified in the planning process include:

- Planning for pedestrian accommodations and links to the broader network with all new development;
- Develop a sidewalk retrofit/maintenance program;
- Identify crosswalks on primary system in need of improvement (signs, pavement markings, signals);
- Adopt pedestrian-friendly street design standards for new development; require connectivity in new developments to downtown and public institutions; and

- Adopt a complete streets ordinance/resolution to ensure that pedestrian needs are considered in the design of VDOT projects and meet ADA accessibility requirements. The Virginia Department of Rail and Public Transportation (DRPT) have published “Multimodal System Design Guidelines,” appended in 2014 to the VDOT Design Manual, as a statewide Complete Streets policy.

The bicycle and pedestrian facilities recommended in this plan may be implemented incidental to existing programmed highway construction and maintenance projects, or they may be pursued as stand-alone capital projects submitted to the Commonwealth Transportation Board (CTB) for inclusion in the state Six-Year Improvement Program (SYIP). Retrofits involving re-striping alone can be done incidental to resurfacing and reconstruction projects. Shoulders and sidewalks could be added as part of a roadway widening or reconstruction. Paved shoulders benefit motorists and taxpayers as well as bicyclists; they provide a margin of safety for all road users, and extend the life of the pavement. .

The following recommendations should be considered next steps for both the Town and County leadership and staff in planning and implementing strategies for improving bicycle and pedestrian accommodations. This includes:

- Incorporation of the preceding bicycle and pedestrian accommodations into updates to local comprehensive and transportation plans;
- Working with NSVRC and VDOT staff to incorporate bicycle and pedestrian accommodation projects identified in Tables 1 and 2 into the Virginia’s Six-Year Improvement Plan and VDOT maintenance program.
- Directing local and NSVRC staff to pursue funding opportunities for additional planning, design/engineering and construction of facilities improvements identified in Tables 1 and 2;
- Coordination with local economic development entities and regional tourism websites (i.e. Bike the Valley) to promote bicycle tourism opportunities; and
- Continued coordination with local law enforcement, public schools and local clubs to provide continued bicycle and pedestrian safety and awareness training opportunities.

The Town of Berryville and Clarke County consider bicycling and pedestrian amenities to be a key component of sustainable community and economic growth while connecting the localities to the broader region.

## Introduction

### Project Purpose

Bicycle and pedestrian links are vital to a community's overall health, safety and welfare. There are numerous economic development benefits in the intersection between bicycling, walkability and tourism. Bicycling and walking are an important mode of transportation, whether used separately or with other modes of transportation. Since 1991, the federal government has recognized the role of bicycle and pedestrian modes and their importance as part of an overall balanced transportation system. The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) placed increased importance on the use of the bicycle from a transportation standpoint and called on each state Department of Transportation to encourage its use. With the passage of the Transportation Equity Act for the 21st Century (TEA-21) and its successor, SAFETEA-LU, the federal government reaffirmed its commitment to bicycling. In Virginia, the Department of Transportation (VDOT), the Department of Rail and Public Transportation (DRPT), planning districts and localities have recognized the need for a comprehensive approach to bicycle and pedestrian planning. Thus this plan seeks to integrate previous planning efforts and identify priorities for future implementation.

The *Town of Berryville & Clarke County Bicycle and Pedestrian Plan* was prepared in response to a joint request from the Town of Berryville and Clarke County under the Northern Shenandoah Valley Regional Commission (NSVRC) Rural Transportation Work Program at no cost to either locality. The Plan provides a comprehensive overview of the existing transportation network and outlines recommendations for bicycle and pedestrian enhancements in each locality to better serve transportation, recreation and economic development objectives. This Plan will serve to inform future planning efforts by Berryville and Clarke County, including the *Parks & Recreation Plan* element of the Clarke County Comprehensive Plan update (2013) and tourism and marketing initiatives.

Finally, this Plan also provides an overview of outdoor recreational opportunities in Berryville and Clarke County and an analysis of the interconnectivity among on-street bicycle accommodations, pedestrian facilities, trails, parks, and other points of interest or tourist destinations.

### The Planning Process

The planning process consisted of a series of facilitated project steering committee meetings held October 2013 to March 2014; the development and analysis of bicycle and pedestrian related data, trends and projections; development and implementation of stakeholder outreach through a public input session and public outreach website; and a capital improvements project priorities list of bicycle and pedestrian enhancements. Berryville and Clarke County identified the following items to be prioritized when developing this Plan:

- Emphasis on economic development and bicycle tourism;
- Using the 2004 Walking and Wheeling Plan as a basis for the current planning efforts;
- Generating a site-specific improvement program, rather than a policy plan;

- Planning/coordination with US Bicycle Route 11 development including support of routing through the Town of Berryville (see USBR 11 Draft Route Map in Appendix B);
- Link existing route network with City of Winchester (Green Circle Trail) and with the Washington & Old Dominion (W&OD) Trail across the mountain in Purcellville to create regional bicycle tourism opportunities;
- Connectivity to local area attractions (see Map 2, page 13);
- Emphasis on improvements to roadway segments to link existing bicycle network;
- Intensive treatments within town's such as shared lane markings or bike lanes where feasible;
- Identify bicycle rally/ride event management best practices;
- Identify future funding opportunities; tie project priorities to VDOT Six-Year Improvement Plan projects; and
- Link with Safe Routes to School initiatives (Berryville).

In preparation for analyzing current bicycle and pedestrian facilities applicable planning documents that were developed state-wide, regionally and locally were explored and provide the framework for future planning and prioritization efforts in Berryville and Clarke County. Documents reviewed provide policy implications for bicycle and pedestrian planning, and long-, mid-, and short-term priorities as previously identified. The following plans were reviewed and are summarized in Appendix A:

- Virginia Department of Transportation (VDOT) State Bicycle Policy Plan (2011);
- VDOT Policy for Integrating Bicycle and Pedestrian Accommodations (2004);
- VDOT Community Trail Development Guide (2012);
- VDOT Route 340 Context Sensitive Solutions (CSS) Study (2012);
- Walking & Wheeling the Northern Shenandoah Valley (2004);
- Northern Shenandoah Valley Rural Long Range Transportation Plan (RLRTP, 2011);
- Town of Berryville Comprehensive Plan ;
- Berryville Area Plan;
- Clarke County Comprehensive Plan (2013); and
- US Bicycle Route Corridor Plan (2012).

The final outcome of this planning process is the delivery of a physical document which outlines the methodology of the study, summarizes data analysis and presents policy and implementation recommendations.



## Economic Benefits of Bicyclists & Pedestrians

### A. Bicycling

The Town of Berryville and Clarke County are an existing regional magnet for recreational cycling, with riders from Virginia, Maryland, West Virginia and Washington DC utilizing the existing network of routes. Gentle topography, relatively low traffic volume, miles of designated VA Scenic Byways, attractive scenery, historic villages and a variety of historic/destination sites make these communities attractive to a variety of bicycling enthusiasts. Driving this economic development and tourism opportunity are local and regional cycling guidebooks that showcase routes in Berryville and Clarke County, and the annual Back Roads Century, billed as one of the premier cycling events in the mid-Atlantic region. This event attracts more than 2,000 visitors, many of whom book local accommodations and later return to explore the area on their own..

As bicycling continues to grow in popularity for health, fitness, recreational and tourism reasons, Berryville and Clarke County are poised to continue to attract existing and new riders. Careful planning will ensure that the community captures the dollars generated by this activity.

Like other tourists who visit the area, pedestrians and bicyclists represent additional (and new) potential customers who can bring revenue into the Berryville and Clarke County community by patronizing local businesses that meet their needs and contribute to their overall desired experience. And when a particular bicycling destination is so appealing to bicyclists that they will come from some distance away to enjoy it, the dollars they bring with them can be significant.

Key characteristics of bicycle tourists that make them an important demographic for expanding tourism and economic development opportunities in Berryville and Clarke County are (per a U.S. Cultural & Heritage Tourism Marketing Council 2009 survey):

- Generally have a higher income than their motorist counterparts;
- Travel in small to medium sized groups;
- Are interested in learning about communities they travel through and what makes it unique, and in participating in what they have to offer (dining, museums, shops);
- Spend money; many bicyclists who tour independently carry a minimum of equipment and pay for lodging in facilities ranging from bed and breakfasts to camping to hotels and eat meals in restaurants as they go;



Source: Google Images, 2014

- Are low-impact visitors; bicyclists generally do not: contribute to traffic on local streets, occupy limited parking spaces, add significant wear and tear on infrastructure, or bring the noise and air pollution associated with motor vehicles; and
- Bicyclists provide an incentive for preserving a community's unique character, historic heritage and natural features. Because of their interest in exploring and learning about the places they visit, they are likely to spend more money in communities that have preserved and interpreted elements of their past and their natural setting.

In a survey of heritage travelers, of which bicycle tourists are widely considered a large sub-group, conducted for the U.S. Cultural & Heritage Tourism Marketing Council, 65% stated that bicycle tourists seek travel experiences where the "destination, its buildings and surroundings have retained their historic character." Additionally, according to the study, bicycle tourists spend an estimated \$100 per day (average) compared to \$13 per day for automobile visitors.

The Berryville and Clarke County community is well-suited to capture this emerging tourist sector because of their community's rich history, amenities and natural scenery. This Plan will provide recommendations in subsequent sections to make bicycling and walking more convenient for residents and tourists alike. Outlined below are best practices for making communities "bicycle friendly" as identified by the League of American Bicyclists.

#### Best Practices for "Bicycle Friendly" Communities

Below is a summary of fundamental elements (from [www.AmericanTrails.org](http://www.AmericanTrails.org)) for communities to consider in becoming more bicycle friendly and capitalizing on emerging tourism and economic development opportunities for bicycling.

- Shift the perspective: Grasp the needs of traveling bicyclists. Key questions: Can bicyclists find amenities easily? Do they feel safe? What barriers do they encounter?
- Welcome bicyclists: Offer the services and facilities they need. Start with some simple signs: "Welcome to the Community"; "Bicyclists Welcome" at businesses, attractions, parks, etc.
- Give them information: Information about where they are or soon will be and where they can find what they need is critical.
- Help them find the community: Develop signage and gateways to attract riders.
- Provide safe access: Be sure that the roads bicyclists will use to get into the community are bicycle-friendly.

- Bicycle parking: Bicycles need protection from theft and, if possible, weather. Provide convenient and secure bicycle parking facilities (i.e. bike racks)
- Highlight the amenities: Make water and public restrooms easy to find. If public facilities aren't available, work with businesses to have restrooms available. Rest and shelter are important to bicyclists, too; chairs, benches and covered porches or pavilions in parks are great. Compile a list of places where showers are available (e.g., health clubs, the YMCA/YWCA, a welcome or visitor center, nearby state parks).

Becoming more bicycle-friendly will directly benefit all residents of Berryville and Clarke County as much as it does bicycling visitors. By broadening options for transportation, recreation and physical activity, bicycling will contribute to improved health, a cleaner environment and an enhanced quality of life.

#### B. Walking

Several advantages accrue to places that are walkable: livelier business districts, healthier populations, and stronger real estate markets. Walkable places allow residents to incorporate exercise into their daily routines. Walking to school helps schoolchildren maintain a healthy weight, thus reducing obesity-related illness; and improves their focus in class. Residents and visitors alike (bicyclists included) value a safe and attractive walking environment.

Clarke County has not experienced the types of auto-oriented sprawl development which discourages walking with many secondary roads providing a pleasant walking experience. Berryville, the County's locus of residential and commercial development, is rated as "very walkable" by the popular website Walkscore.com, for essential goods and services within walking distance for many residents. Berryville's compactness, numerous and varied Main Street retail businesses, interconnected street grid and interesting historic streetscapes lend themselves to walking.

To realize Berryville's full potential as a pedestrian-friendly town, attention must be paid to: sidewalks and crosswalks. Many local streets lack sidewalks; and most crosswalks on the primary system (Route 340 and Business Route 7) lack signage and markings which warn motorists to watch for pedestrians. This is addressed in subsequent sections of this Plan.

#### C. Recreation Walking/Hiking

Berryville and Clarke County offer a number of recreational walking neighborhoods and venues.

**Berryville Historic District** – Historic downtown Berryville allows for easy pedestrian access to restaurants and businesses and connectivity to historic areas of the Town. A multi-use trail along West Main Street connects Berryville with Chet Hobert Park. A walking tour has been developed by Berryville Main Street and is available at their office on East Main Street.

**Chet Hobert Park** – Located west of Berryville off Route 7 Business at 225 Al Smith Circle, 102-acre Chet Hobert Park offers a number of amenities including an outdoor swimming pool, lighted outdoor tennis

courts, six ball fields, numerous soccer fields, a Recreation Center, senior center, four picnic shelters, and two playgrounds. Approximately two miles of fitness trail around the perimeter of the Park is used by walkers, runners, and cyclists. The trail features wooded areas, wildlife and rock formations and is accessible to all ages and fitness levels.

**Appalachian Trail** – Approximately 10 miles of the 2,184-mile Appalachian Trail, one of the longest continuous footpaths in the world, is located in eastern Clarke County. Accessed from Blue Ridge Mountain Road, Bears Den Trail Center is a hiker facility which includes a hostel and campground. In addition to providing overnight lodging and facilities for A.T. hikers, Bears Den also offers nature trails, picnic areas, and welcomes hikers and nearby residents with educational programs, live music and other events. Built in 1933, the lodge features native stone and was originally home to a Washington, D.C. physician and his wife. The property is included in the recently designated Bears Den Rural Historic District in Virginia which has been nominated for inclusion in the National Register of Historic Places.

**Shenandoah University River Campus at Cool Spring Battlefield** – Offering over five miles of paved trails for walking, running and biking, the SU River Campus is open to the public and offers a variety of spectacular views of the Shenandoah River and the surrounding farmland of Clarke County.

**Blandy Experimental Farm | State Arboretum of Virginia** – Located on Route 50, Blandy Experimental Farm | State Arboretum of Virginia offers beautiful natural setting with a number of amenities including four trails ranging from three-quarters of a mile to two miles on its 700 acre site. Paved and gravel paths allow visitors to stroll the grounds and walk through the chestnut grove and community garden and viewing Lake Arnold. A bridle trail is also featured on the premises.



## Documentation of Existing Conditions

As part of the inventory of the existing bicycle and pedestrian network in Berryville and Clarke County, a comprehensive assessment of the bicycle and pedestrian networks was conducted.

### A. Bicycle Network

This assessment investigated the locations of existing routes, and sought to identify historic, cultural, and amenities resources along those routes. The following series of maps illustrates these findings, showing bicycle connections between features such as the Appalachian Trail, Civil War battlefields, public/cultural destinations, and the Shenandoah River. Proximity and linkages to these sites are vital to creating a tourist destination and complementary economic development opportunities for the Town and County.

The following sources were used to identify existing bicycle routes/networks:

- Walking & Wheeling the Shenandoah Valley Plan (2004);
- Virginia Outdoors Plan (2013);
- Virginia Bicycling Guide;
- Winchester Wheelmen Bicycle Club;
- Potomac Pedalers Touring Club; and
- Panhandle Pedalers Cycling Club

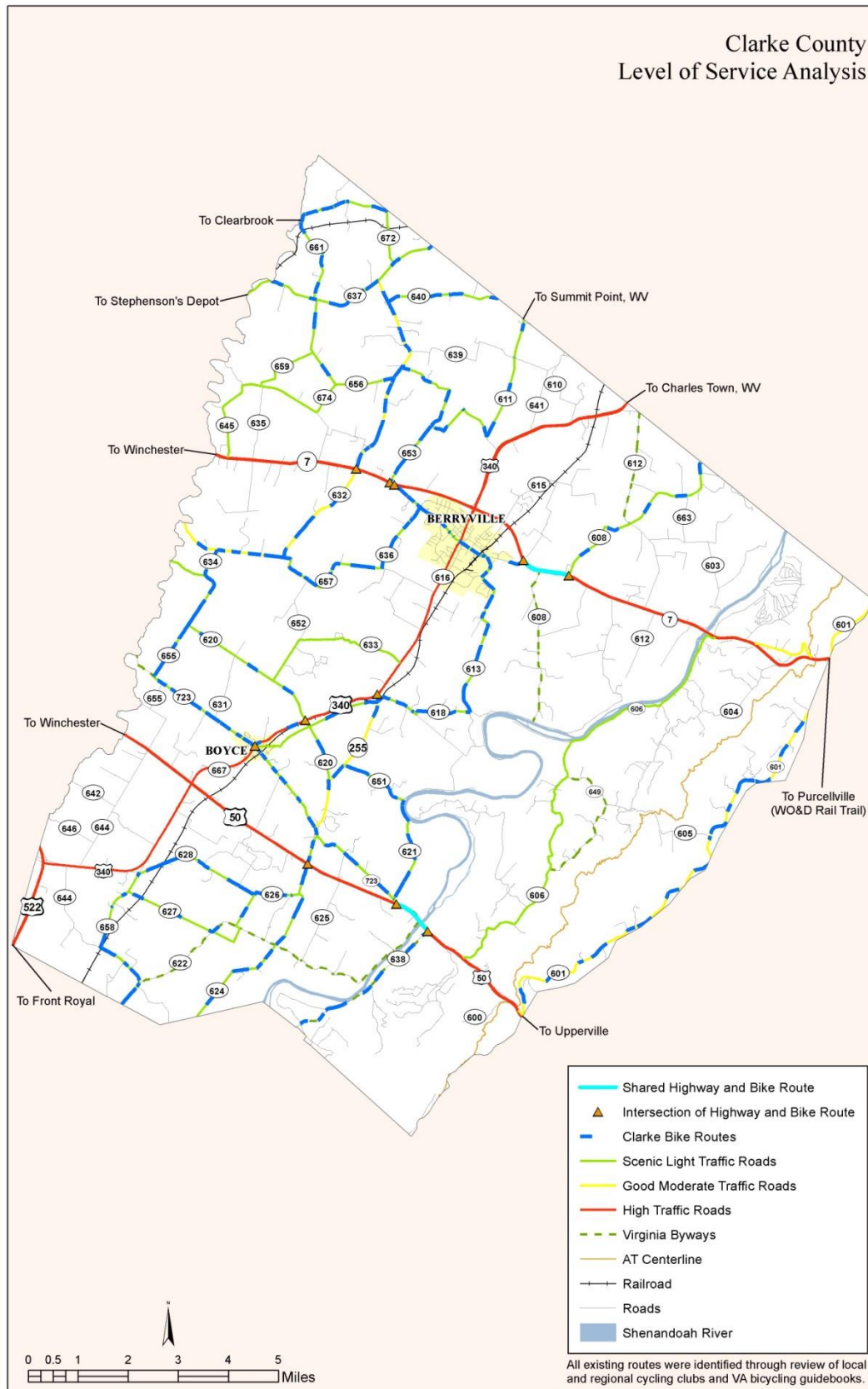
Also included is a Level of Service (LOS) analysis updated from the Walking & Wheeling the Shenandoah Valley Plan. See maps 1 (page 13) and 2 (page 14) for analysis. Full route maps for all available rides are included in the Appendix B section of this Plan.

As discussed in earlier sections, the steering committee identified the Town of Berryville and Clarke County as a regional magnet for bicycle tourism.

Challenges to bicycling to Berryville and Clarke County include the following:

- Continuity of low-volume routes broken by primary system segments without shoulders;
- Lack of bike parking in downtown Berryville and major destinations/points of interest;
- Primary system in Berryville could be more welcoming of bicyclists;
- Motor vehicle and bicyclist conflicts; concerns for safety of all road users;
- Need for increased coordination among local Town/County departments and club/bicycle event promoters for event planning and management;
- Lack of a cohesive strategy for monetizing bike tourism;
- No safe route/link to Washington & Old Dominion (W & OD) Trail (Purcellville, VA);
- Lack of long-distance linear corridors (railroad abandonments, greenways, floodplains) suitable for the development of multi-use trails; and
- Need for more multi-use trails (or shared-use paths) in local urban areas (Berryville).

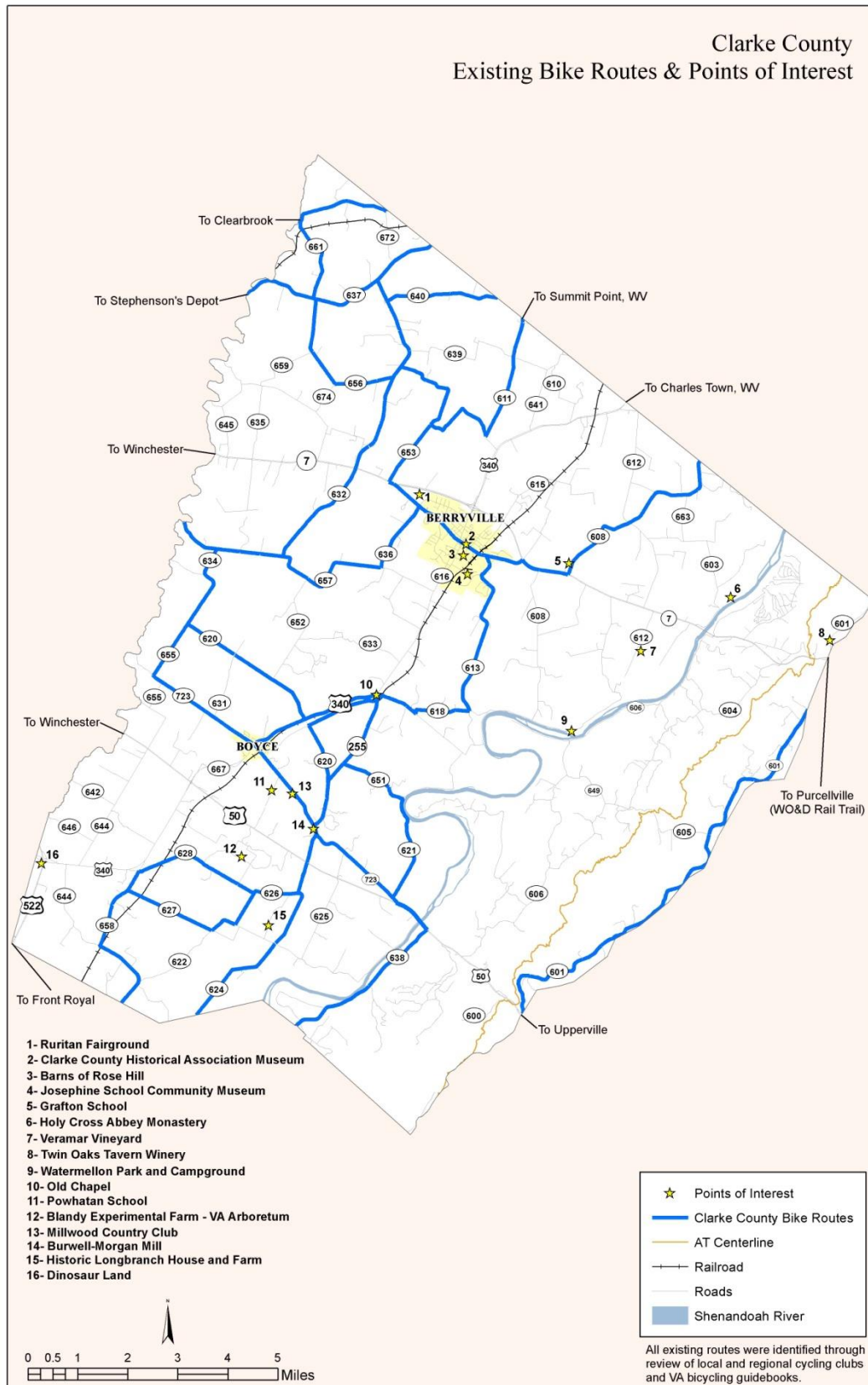
Map 1





# Map 2

## Clarke County Existing Bike Routes & Points of Interest



## B. Pedestrian Network

Additionally, an assessment of the pedestrian network, primarily in the Town of Berryville, is summarized below and in Map 3 (page 15). Pedestrian accommodations are vital to small, compact communities, especially to encourage use of the downtown business district and provide safe access to community amenities (schools, libraries, parks).

### *Zoning Ordinance Requirements for Sidewalks; Subdivision Requirements for Sidewalks/Trails*

Zoning and subdivision requirements are critical to ensuring that new development is well connected within the existing pedestrian network and meets the minimum standards for facility design and construction. Below is a summary of the applicable Town of Berryville requirements for the pedestrian realm.

*Sidewalks, paths, and/or walkways shall be provided to enable the public to walk safely and conveniently from one building to another on the site, to and from adjacent sites, and to and from sidewalks in the public right-of-way. The construction material to be used must meet the approval of the Administrative Body or the Agent. Sidewalks must be a minimum of four (4) feet wide.*

*In residential subdivisions, sidewalks shall be required on both sides of all public streets within the subdivision and along the side of each public street, except Virginia Route 7 Bypass, which borders the subdivision. According to code,*

- *Sidewalks shall be constructed, at no cost to the Town, as required by the Berryville Zoning Ordinance. All sidewalks shall be constructed in accordance with Virginia Department of Transportation standards.*
- *The subdivider shall provide all improvements necessary to sidewalks in the subdivision in conformity with Section 15.2-381 of the Code of Virginia, as amended, requiring curb ramps for the handicapped.*
- *The subdivider shall construct trails or walkways in accordance with the general location shown on the adopted Berryville Area Plan, together with such other connecting trails or walkways within the limits of the subdivision plan.*

The Town of Berryville cited the following as contributing factors to the overall efficiency of the pedestrian network in and around the Town:

- Relative connectivity of sidewalks to and from the downtown business district and park;
- A detailed School Travel Plan to encourage walking and biking to school (Johnson-Williams Middle School); and
- Connectivity requirements of existing (and future) subdivisions to include pedestrian accommodations.

Impediments to efficient pedestrian accommodations in the Berryville area include:

- Need for sidewalks to meet Americans with Disabilities Act (ADA) standards (i.e. minimum of 36" width) for mobility for all persons regardless of abilities;
- Lack of sidewalks in older neighborhoods (at least on one side of the street); and
- Need for a comprehensive inventory of existing sidewalk conditions.



### *Millwood Village*

At the crossroads of two Virginia Scenic Byways and as the focus of a rural historic district, the village of Millwood epitomizes the charm and character that draw residents and visitors to Clarke County. The village experiences very high volumes of bicyclist and general tourist traffic. The grounds of the historic Burwell-Morgan Mill serves as a rest stop serving hundreds of bicyclists during the annual Back Roads Century ride, and also hosts weddings, plays, concerts and picnics. Directly across the street, Locke Store is a popular destination. Millwood is also a long-standing residential community.

Roadway widths (10' travel lanes) and alignment, closely spaced intersections, a modest amount of roadside parking and traffic congestion and a sense of place all serve to calm traffic in the village. Pedestrians, however, must share the road with motor vehicles as sidewalks are absent. Crosswalks are delineated across Millwood Road (Route 255/723) between the Mill and Locke Store, and across two of the three legs of the Bishop Meade Road/Millwood Road intersection; the latter are in need of maintenance.

Millwood area residents through the Millwood Community Association (MCA) have a record of advocating for pedestrian improvements. The MCA has coordinated with local law enforcement, local government and VDOT to slow motor vehicle traffic, improve the pedestrian environment and enforce traffic and parking regulations.



Burwell-Morgan Mill. Source: NSVRC, 2013



## Prioritization for Implementation

### A. Bicycle Accommodations

The lists of roadways for bicycle accommodation were developed based on geographic information systems (GIS) analysis of roadway data, review of the 2004 Walking & Wheeling priorities, and VDOT, local staff and citizen input. Accessibility and connectivity between activity centers and tourism/outdoor recreation opportunities were also considered in developing these priorities for facility enhancement. As previously referenced, the 2004 VDOT Policy for Integrating Bicycle and Pedestrian Accommodations improved the ability of a county to use its secondary roads allocation to plan, design, and construct bicycle facilities. It should be noted that all VDOT maintained roads in the respective localities, in addition to the recommended corridors, are covered under the framework of the VDOT Policy for Integrating Bicycle and Pedestrian Accommodations. Maps and a table showing recommended corridors for bicycle enhanced accommodation are included in the following pages.

Specific bicycle accommodations are not included for corridors listed on the tables. For the purposes of this Plan, all types of bicycle accommodations are considered as possible means to improve bicycling conditions in the localities. Any treatment designed to better accommodate bicyclists should be applied based on location-specific analyses of roadway characteristics, geometric and operational design parameters, and other considerations.

All facility improvements should be consistent with VDOT design standards and policies and Manual of Uniform Traffic Control Devices (MUTCD) Chapter 9: *Traffic Control for Bicycle Facilities*. Where feasible, roadway improvements should be made in conjunction with VDOT's existing project and paving schedule and the minimum paved shoulder width should be used depending on roadway functional classification. All costs discussed are estimates and subject to further revision. Additionally, coordination among staff should be undertaken where projects link with adjacent localities (City of Winchester, Frederick, Loudoun & Warren Counties).

In general the following treatments are recommended by roadway type in Berryville and Clarke County. Details of the best practices listed above for bicycle facility design are included in subsequent parts of this section

#### Local/Urban

- Narrow travel lanes to reduce speed of motor vehicles (Berryville & Millwood);
- Intersection crossing markings; and
- Share the Road, Wayfinding signs; and
- Multi-Use Trails

#### Rural

- Where feasible add paved shoulders (Recommended minimum width 4 feet);
- Share the Road signs; and
- Wayfinding signs

The overall goal of these recommended treatments is to make the existing bicycle network safer and more efficient for existing users (motorist, bicyclist and businesses).

Table 1 (page 17) and Map 4 (page 18) depicts road segment priorities as identified by the project steering committee. These priorities represent vital bicycling links between existing routes identified in the previous section (and Appendix), and should be placed along shared facilities.

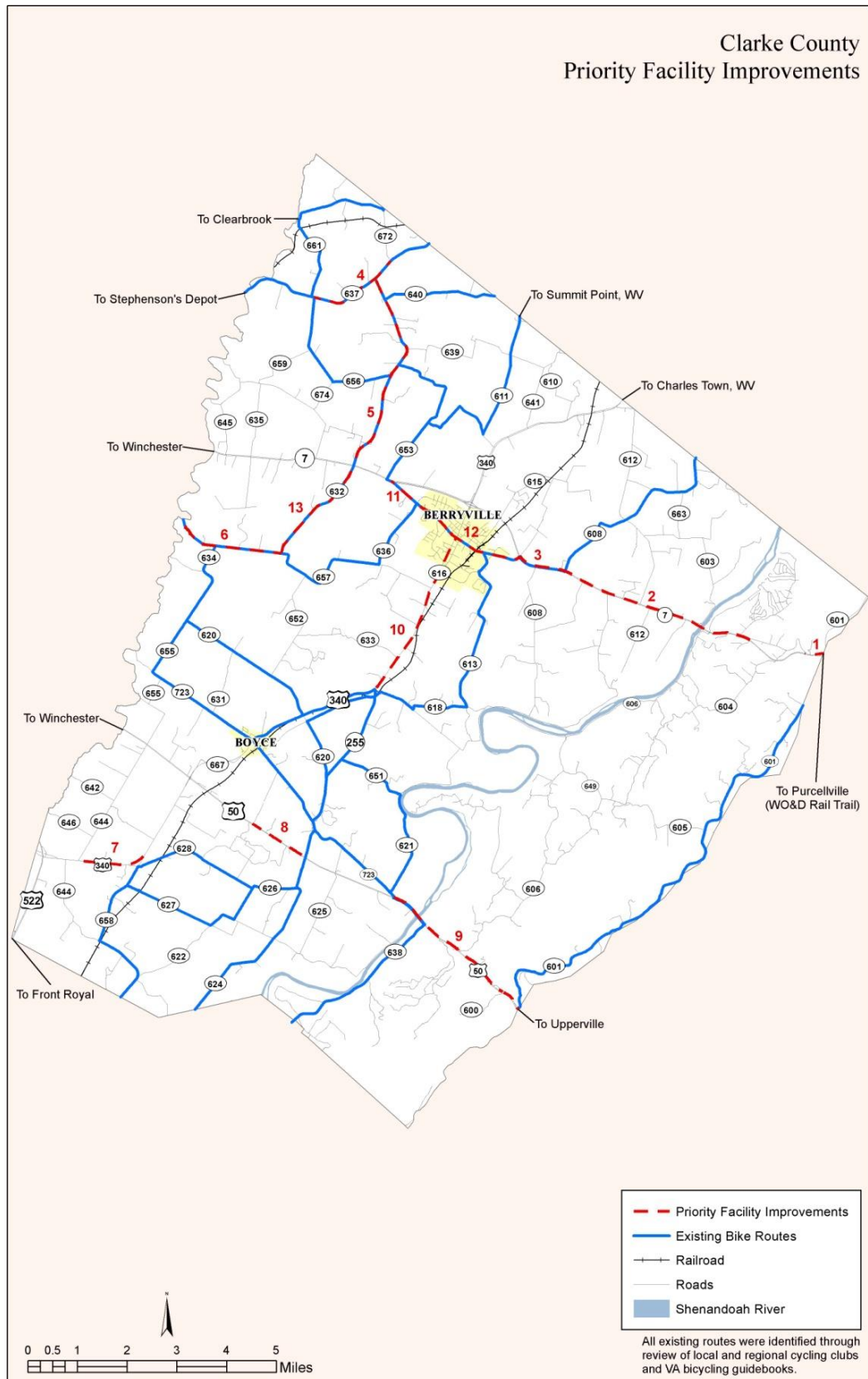


Table 1: Proposed Bicycle Accommodations

Map ID	Road Name	Description	Segment Length (Miles)	Short-Term Recommendations	Long-Term Recommendations	Short-Term Recommendations Cost Estimates	Long-Term Recommendations Cost Estimates
1	HARRY BYRD HWY (7)	Between Pine Grove Rd. (679) and Loudoun County Line	0.27	Share the Road Signage	2-4 ft Paved Shoulders	\$200 per sign (including the cost of installation)	\$75,600
2	HARRY BYRD HWY (7)	Between Wickliffe Road (608) and Pine Grove Road (679)	4.02	Share the Road Signage	2-4 ft Paved Shoulders	\$200 per sign (including the cost of installation)	\$1,125,600
3	HARRY BYRD HWY (7)	Between Berryville Town Boundary and Wickliffe Road (608)	0.98	Share the Road Signage	2-4 ft Paved Shoulders	\$200 per sign (including the cost of installation)	\$274,400
4	OLD CHARLES TOWN RD	Between Wadesville Road (661) and Swinley Road (672)	1.88	Share the Road Signage	2-4 ft Paved Shoulders	\$200 per sign (including the cost of installation)	\$526,400
5	CRUMS CHURCH RD (632)	Between Old Charles Town Pike (657) and Harry Byrd Hwy (7)	6.56	Share the Road Signage	2-4 ft Paved Shoulders	\$200 per sign (including the cost of installation)	\$1,836,800
6	SENSENY RD	Frederick County Line to Crums Church Road (632)	2.26	Share the Road Signage	2-4 ft Paved Shoulders	\$200 per sign (including the cost of installation)	\$632,800
7	LORD FAIRFAX HWY	Between Featherbed Road (644) and White Post	1.38	Share the Road Signage	2-4 ft Paved Shoulders	\$200 per sign (including the cost of installation)	\$386,400
8	JOHN MOSBY HWY (50)	Between Blandy Farm Lane (750) and Bishop Meade Rd (255)	1.26	Share the Road Signage	2-4 ft Paved Shoulders	\$200 per sign (including the cost of installation)	\$352,800
9	JOHN MOSBY HWY (50)	Between Tillhammer Mill Road (621) and Loudoun County Line	3.40	Share the Road Signage	2-4 ft Paved Shoulders	\$200 per sign (including the cost of installation)	\$952,000
10	LORD FAIRFAX HWY	Between Bishop Meade Rd (255) and Main Street (Business Route 7)	3.49	Share the Road Signage	2-4 ft Paved Shoulders	\$200 per sign (including the cost of installation)	\$977,200
11	W MAIN ST	Between Route 7 and Berryville Town Boundary	3.14	Share the Road Signage	2-4 ft Paved Shoulders	\$200 per sign (including the cost of installation)	\$879,200
12	MAIN ST	Main Street through Berryville (Business Route 7)	3.14	Share the Road Signage; Shared Lane Markers (Sharrows); Intersection Crossing Markings	Protected Bike Lanes	\$200 per sign (including the cost of installation) plus \$20,000 for Intersection Crossing Markings plus the cost of Lane Markers (Sharrows)	\$200 per sign (including the cost of installation) plus \$20,000 for Intersection Crossing Markings plus the cost of Lane Markers
13	TRIPLE J RD (632)	Between Harry Byrd Hwy (7) and Senseny Rd (657)	2.34	Share the Road Signage	2-4 ft Paved Shoulders	\$200 per sign (including the cost of installation)	\$655,200
<b>Total</b>			<b>31.78</b>				<b>\$8,694,400</b>

Source: NSVRC, Geographic Information Systems (GIS), 2014. Notes: These cost estimates should be regarded as planning level and preliminary in nature. Variations from actual project costs will result from additional factors such as design exceptions, value engineering, utility relocation, and environmental impacts. As projects move forward in the project development process, emerging details will support the refinement of these costs. All recommendations are subject to approval by the Berryville Town Council and Clarke County Board of Supervisors and should be consistent with Virginia Department of Transportation (VDOT) design standards and policies. For Long-Term Recommendations Cost Estimates, costs are based on the construction of a 2 ft paved shoulder. To get the cost of an 4 ft paved shoulder multiply the cost provided by 2.

Map 4



### Best Practices for Bicycle Facility Design

Bicycle facilities should be designed to maximize consistency for bicyclists and minimize conflicts with other roadway users (cars & trucks). Whenever possible, bicycle facilities should be constructed that connect bicyclists to destinations or connect the larger bicycle or pedestrian network. Isolated, short bicycle facilities that begin and end abruptly without connecting to a destination should be avoided unless they are part of a planned, phased approach to bikeway development (e.g., as development occurs on a designated corridor). Below is a summary of best practices in facility design and less-intensive treatment options that may be appropriate for implementation in Berryville and Clarke County. These best practices are also consistent with VDOT's Policy for Integrating Bicycle and Pedestrian Accommodations (summarized above).

#### *Shared Lane Markings ("Sharrows")*

Sharrows are white pavement markings consisting of a bicycle icon below a chevron pointing in the direction of travel. Placed in the center of the travel lane on low-speed streets without bike lanes or having insufficient width for lane sharing, they indicate to bicyclists the proper lateral roadway position, while reminding motorists that it is lawful and appropriate for bicyclists to "take the lane" to avoid the parking lane "door zone," to increase bicyclist conspicuity, and to deter unsafe motorist overtaking.

#### *Narrow Travel Lanes*

Restriping to reduce travel lane widths can help free pavement width to accommodate bicycle facilities without widening the roadway or acquiring additional right-of-way. On freight, heavy traffic volume, and emergency response routes, inside travel lanes may be narrowed, but 12' outside lanes should be maintained, where possible, to prevent larger vehicles from encroaching upon bicycle facilities.

#### *Narrow or Remove Center Turn Lane*

On roadways with low left-turn volumes or excess turn lane capacity, the center turn lane may be narrowed or removed and the roadway restriped to accommodate bicycle facilities. Intersection geometry and potential safety implications (e.g., increases in rear end crashes) should be considered when assessing potential turn lane changes.

#### *Paved Shoulders*

In areas where other roadway modifications are not feasible and adequate right-of-way is available, additional pavement width may be constructed to accommodate bicycle facilities (as compatible with VDOT design standards). Additional pavement width for bicycle facilities should not detract from adjacent sidewalk width or pedestrian. Shoulder pavement width can vary from 2 feet to 10 feet depending on roadway type.



Source: FHWA, 2014

#### *Protected Bike Lanes*

A protected bike lane (or "cycle track") is an exclusive bike facility that has elements of a separated path and on-road bike lane. A protected bike lane, while still within the roadway, is physically separated from motor traffic and is distinct from the sidewalk.

### Other Treatments

Treatments are less intensive facility design options for bicyclists. The treatments identified below would be considered the most appropriate for modifications within the Town of Berryville and/or shared facilities at major intersections throughout the Town and County.

**Intersection Crossing Markings:** Intersection crossing markings are pavement markings through intersections that delineate the path that bicyclists should take through an intersection or across a driveway or ramp. Different marking strategies, including colored bike lanes or chevrons are used throughout the country. Crossing markings are not currently addressed under VDOT facility standards.

- Establish expected bicycle travel paths and increase the visibility of cyclists
- Define and raise awareness of potential conflict zones
- Increase bicyclist level of comfort by delineating route through Intersections

**Wayfinding/Share the Road Signs:** Wayfinding signs are typically placed at key locations leading to and along bicycle routes, including where multiple routes intersect and at key bicyclist “decision points.” Wayfinding signs displaying destinations, distances and “riding time” can dispel common misperceptions about time and distance while increasing users’ comfort and accessibility to key destinations. ‘Bike Route’ signage is currently allowed under VDOT facility standards; more detailed bikeway signage is included in the 2009 MUTCD. All signage on state-maintained roads should be reviewed by VDOT prior to installation.

- A cost-effective yet highly-visible treatment that can improve the riding environment

### Best Practices for Bicycle Events

Bicycling events are becoming larger and more frequent in the Berryville and Clarke County communities. Recently, the localities have experienced conflict between event participants and the local non-bicycling community over crowds, safety and sharing the roadways. Although these events can provide a large economic boost for the community, they can also be viewed as a nuisance by local residents. As part of the Berryville/Clarke County Bicycle and Pedestrian Plan, the management team sought to identify best practices in planning, hosting and managing large cycling events. These best practices are summarized in Appendix C.



### B. Pedestrian Accommodations

The lists of proposed pedestrian accommodations were developed based on geographic information systems (GIS) analysis of aerial data, review of the 2004 *Walking & Wheeling the Shenandoah Valley* priorities, *SRTS Comprehensive School Travel Plan* and VDOT, local staff and citizen input. Accessibility and connectivity between activity centers (schools) and tourism/outdoor recreation opportunities were also considered in developing these priorities for pedestrian facility enhancement. Since the majority of these facilities are confined to the Town of Berryville, recommendations are tailored to the more urban environment.

Site specific recommendations (from *SRTS Comprehensive School Travel Plan*) include:

- A. Replace/repair sidewalk along Swan Ave (along the property line of Johnson Williams Middle School);
- B. Install radar speed displays that flash when vehicles are exceeding the speed limit on South Buckmarsh Street; and
- C. Maintain/enhance crosswalks at intersections of Crow Street/South Buckmarsh Street and West Main Street/South Buckmarsh Street.

See Table 2 (page 22) and Map 5 (page 23) for the complete list of site specific recommendations for pedestrian improvements.

Other non-site specific recommendations include:

- Include pedestrian accommodations and links to the broader network with all new development;
- Develop a sidewalk retrofit/maintenance program;
- Identify crosswalks on primary system in need of improvement (signs, pavement markings, signals);
- Adopt pedestrian-friendly street design standards for new development; require connectivity in new developments to downtown and public institutions; and
- Adopt a complete streets ordinance/resolution to ensure that pedestrian needs are considered in the design of VDOT projects and meet ADA accessibility requirements.<sup>1</sup>

*Complete Streets are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists, and bus riders of all ages and abilities are able to safely move along and across a complete street.*

## Complete Streets are Safe Streets



Source: National Complete Streets Coalition, 2014

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<sup>1</sup> The Virginia Department of Rail and Public Transportation (DRPT) have published "Multimodal System Design Guidelines," appended in 2014, to the VDOT Design Manual, as a statewide Complete Streets policy.



**Table 2: Proposed Pedestrian Accommodations**

Map ID	Road Name	Description	Segment Length (Feet)	Short-Term Recommendations	Safe Routes to School Project? (Y or N)	Short-Term Recommendations Cost Estimates
A	Swan Ave	Along property line of Johnson-Williams Middle School	840	Replace sidewalk (base & stormwater facilities)	Y	\$44,800
B	South Buckmarsh Street	Between Crow Street and Rosemont Circle	0	Install lit speed signs	Y	\$50,000
C	South Buckmarsh Street	AT Crow Street and West Main Street	0	Maintain crosswalks at intersection	Y	\$20,000
D	Battletown Drive	Between East Main Street and property line of Friar property	1,150	Extend sidewalk to connect to larger network	N	\$61,040
E	Walnut Street	Between Willow Lane and North Buckmarsh Street	500	Extend sidewalk to connect to larger network	N	\$26,600
F	East Main Street	Between First Street and Town Boundary	2,050	Extend sidewalk and/or create a shared-use path	N	\$108,640
G	First Street	Between East Main Street and East Fairfax Street	1,475	Extend sidewalk to connect to larger network	N	\$78,400
H	Page Street	To East Main Street	165	Complete sidewalk along Page Street to East Main Street	N	\$8,750
I	Chalmers Court	Intersection of Chalmers Court and East Main Street	80	New crosswalk	N	\$20,000
J	Smith Street	Between West Main Street and Treadwell Street	770	Extend sidewalk to connect to larger network	N	\$40,880
K	Fairfax Street	From North Buckmarsh Street to end of street	900	Extend sidewalk to connect to larger network	N	\$47,740
<b>Total</b>			<b>7,930</b>			<b>\$506,850</b>

Source: NSVRC, Geographic Information Systems (GIS), 2014. Notes: These cost estimates should be regarded as planning level and preliminary in nature. Variations from actual project costs will may result from additional factors such as design exceptions, value engineering, utility relocation, and environmental impacts. As projects move forward in the project development process, emerging details will support the refinement of these costs. All recommendations are subject to approval by the Berryville Town Council and Clarke County Board of Supervisors and should be consistent with Virginia Department of Transportation (VDOT) design standards and policies.



## Funding & Implementation Resources

Below is a summary of potential funding resources that could be used to implement strategies identified above. Typically the grant funding cycle is February through June of each year.

### *Transportation Alternatives Program (TAP)*

The Transportation Alternatives Program (TAP) was authorized in the most recent federal transportation bill Moving Ahead for Progress in the 21st Century, also known as MAP-21 (July 1, 2012). The Transportation Alternatives Program redefines the former Transportation Enhancement (TE) Program and consolidates these eligibilities with the Safe Routes to School and Recreational Trails programs. Fiscal Year allocations vary year-to-year. Qualifying activities under TAP include:

- Construction of on-road and off-road trail facilities for pedestrians, bicycles and other non-motorized transportation users
- Construction of infrastructure related projects and systems that will provide safe routes for non-drivers to access daily needs
- Conversion and use of abandoned railroad corridors for pedestrians, bicycles and other non-motorized transportation users

### *Sunrise Project Grants*

Grants up to \$5,000 will be offered for activities that promote and enhance bicycle accommodations in Virginia localities. Grant funded activities can include but are not limited to:

- Installation of biking related equipment such as racks or crosswalks.
- Educational/encouragement programs to get people active.
- Starting a foundation or non-profit organization to improve biking in your area.
- Conducting a “Share the Road” campaign in your community.
- Seed funding to support a new Open Streets, or Sunday Streets event.
- Develop a website, web content or social media campaign.
- Grow an existing program.



### *Virginia Recreational Trails Program (RTP)*

The Recreational Trails Program (RTP) is a matching reimbursement grant program that provides for the creation and maintenance of trails and trail facilities. The program is funded through the Federal Highway Administration (FHWA) and administered by the Virginia Department of Conservation and Recreation (DCR).

### *Bikes Belong Foundation*

This organization is funded by the bicycle industry, whose mission is, “Putting more people on bikes more often.” “Bikes Belong” awards grants of up to \$10,000 each to projects that seek federal funding for bicycle



facilities. Because each State differs in what it allows to qualify for local match of a project, one must check with the state TEA Transportation Enhancements (TE) coordinator before applying. Bikes Belong grants have been used for concept plans, cartography, design, outreach, and preliminary engineering, as well as contributions to the local match.

*Virginia: Safe Routes to School Mini-Grants*

Bike-Walk Virginia is making available \$1,500 for Walk to School programs. Any school, school district, public agency, or non-profit is eligible to apply. These grants are intended to supplement primary funding from your local community for new or existing Safe Routes to School programs. The funds may be used for local programs as a part of International Walk to School Day. Applicants can request any amount up to \$1,500.

*Kodak American Greenways Grant*

The Kodak American Greenways Awards Program, a partnership project of the Eastman Kodak Company, The Conservation Fund, and the National Geographic Society, provides small grants to stimulate the planning and design of greenways in communities throughout America.

Due to limitations of grant and private funding, where applicable, projects should be included in local capital budgeting and regional priorities including those provided to the Commonwealth's Transportation Board Six-Year Improvement Plan (SYIP) and VDOT maintenance programming. Revenue-sharing is also a viable option as investment in bicycle and pedestrian facilities will have a positive impact on economic development and tourism related revenue.

## Next Steps

Based on the preceding sections, the following recommendations should be considered next steps for both the Town and County leadership and staff in planning and implementing strategies for improving bicycle and pedestrian accommodations. This includes:

- Incorporation of the preceding bicycle and pedestrian accommodations into updates to local comprehensive and transportation plans;
- Working with NSVRC and VDOT staff to incorporate bicycle and pedestrian accommodation projects identified in Tables 1 and 2 into the Virginia's Six-Year Improvement Plan and VDOT maintenance program.
- Directing local and NSVRC staff to pursue funding opportunities for additional planning, design/engineering and construction of facilities improvements identified in Tables 1 and 2;
- Coordination with local economic development entities and regional tourism pages (i.e. Bike the Valley) to promote bicycle tourism opportunities; and
- Continued coordination among local Town/County departments and club/bicycle event promoters for event planning and management; A summary of bicycle safety tips is provided in Appendix D.
- Participation in regional planning efforts for US Bike Route 11 and Shenandoah Valley Bicycle Plan.



Source: [www.bikethevalley.org](http://www.bikethevalley.org), 2014

## Conclusion

The Town of Berryville and Clarke County consider bicycling and pedestrian amenities to be a key component of sustainable community and economic growth while connecting the localities to the broader region. The Town of Berryville and Clarke County are regional magnets for recreational cycling and tourism. Improvements to the bicycle and pedestrian networks will be critical to future economic development and tourism opportunities.

Bicycle and pedestrian links are vital to community and economic health and well-being. Bicycling is an important mode of transportation, whether used separately or with other modes. The *Town of Berryville & Clarke County Bicycle and Pedestrian Plan* was prepared in response to a joint-request from the Town of Berryville and Clarke County under the Northern Shenandoah Valley Regional Commission (NSVRC) Rural Transportation Work Program. The Plan summarizes key regional and local planning efforts, provides a comprehensive overview of the existing transportation network and outlines corridor-specific recommendations for bicycle and pedestrian enhancements in each locality to better serve transportation, recreation and economic development objectives. This Plan will serve to inform future planning efforts by Berryville and Clarke County staffs.





## References

2013 Bicycle Facilities Design Guidelines, AASHTO

2011, *Bicycle Facility Design Toolkit*, Washington County, Oregon, available from: [www.co.washington.or.us](http://www.co.washington.or.us)

2014, *Bike the Valley*, available from [www.cspdc.org/bikeval/](http://www.cspdc.org/bikeval/)

1992, *Berryville Area Plan*, Town of Berryville/Clarke County, Virginia

2013, *Comprehensive Plan*, Clarke County, Virginia

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2013, *Economic Benefit of Trails*, available from: [www.americantrails.org](http://www.americantrails.org)

2009, *Manual of Uniform Traffic Control Devices*: Chapter 9: *Traffic Control for Bicycle Facilities*, available from: [www.virginiadot.org/business/resources/TED/final\\_MUTCD/2013\\_sup/Revision\\_1\\_Part\\_9\\_Bicycles.pdf](http://www.virginiadot.org/business/resources/TED/final_MUTCD/2013_sup/Revision_1_Part_9_Bicycles.pdf)

1995, Porter & Sorrell, *A Cyclist's Guide to the Shenandoah Valley*

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2012, *US Bicycle Route Corridor Plan*, available from: [www.VAbike.org](http://www.VAbike.org)

2014, Virginia Department of Motor Vehicles (DMV) Bicycle Safety Tips, available from: [www.dmv.state.va.us/safety/#programs/bicycle/index.asp](http://www.dmv.state.va.us/safety/#programs/bicycle/index.asp)

2013, Virginia Department of Rail and Public Transportation (DRPT) Multimodal System Design Guidelines

2004, Virginia Department of Transportation (VDOT) State Bicycle Policy Plan, available from: [www.virginiadot.org/programs/bk-default.asp](http://www.virginiadot.org/programs/bk-default.asp)

2011, Virginia Department of Transportation (VDOT) Policy for Integrating Bicycle and Pedestrian Accommodations, available from: [www.virginiadot.org/programs/bk-default.asp](http://www.virginiadot.org/programs/bk-default.asp)

2012, Virginia Department of Transportation (VDOT) Community Trail Development Guide

2012, Virginia Department of Transportation (VDOT) Route 340 Context Sensitive Solutions (CSS) Study

2013, Virginia Safe Routes to School Program, Virginia Department of Transportation

2004, *Walking & Wheeling the Northern Shenandoah Valley*, Northern Shenandoah Valley Regional Commission

2012, Watson & Muellerweiss, *Virginia Road Biking*





# Appendices

*Appendix A: Summary of Key Planning Documents & Public Input*

*Appendix B: Existing Bike Routes Maps; Draft US Bicycle Route 11 Map*

*Appendix C: Best Practices for Bicycle Event Management*

*Appendix D: Bicycle Safety Tips*

## Appendix A: Summary of Key Planning Documents & Public Input

The purpose of this section is to outline current bicycle and pedestrian planning documents developed state-wide, regionally and locally and explore them as an applicable framework for future planning and prioritization efforts in Berryville and Clarke County. Documents reviewed in this section provide policy implications for bicycle and pedestrian planning, and long-, mid-, and short-term priorities as previously identified. The following plans were analyzed and summarized in the section below:

- Virginia Department of Transportation (VDOT) State Bicycle Policy Plan (2011);
- VDOT Policy for Integrating Bicycle and Pedestrian Accommodations (2004);
- VDOT Community Trail Development Guide (2012);
- VDOT Route 340 Context Sensitive Solutions (CSS) Study (2012);
- Walking & Wheeling the Northern Shenandoah Valley (2004);
- Northern Shenandoah Valley Rural Long Range Transportation Plan (RLRTP, 2011);
- Town of Berryville Comprehensive Plan ;
- Berryville Area Plan (2009);
- Clarke County Comprehensive Plan (2013); and
- US Bicycle Route Corridor Plan (2012).

### Virginia Department of Transportation (VDOT) State Bicycle Policy Plan (2011)

The purpose of the State Bicycle Policy Plan is to establish a vision and policy recommendations for bicycle planning activities throughout the Commonwealth of Virginia. Although this plan does not outline specific recommendations for Berryville or Clarke County, the recommendations outlined in the implementation section should be further explored for their applicability in the local setting. This includes:

- *Considering walking and bicycling as equals with other transportation modes;*
- *Ensuring there are transportation choices for people of all ages and abilities, especially children;*
- *Going beyond minimum design standards;*
- *Integrating bicycle and pedestrian accommodation on new, rehabilitated, and limited-access bridges;*
- *Collecting data on walking and biking trips;*
- *Setting mode share targets for walking and bicycling and tracking them over time;*
- *Removing snow from sidewalks and shared-use paths; and*
- *Improving non-motorized facilities during maintenance projects.*



Additionally, the State Bicycle Policy Plan provides references to other VDOT and federal policy documents that should be consulted when evaluating bicycle conditions and planning for improved facilities locally and provides a list of potential resources for implementation. Under “Current Programs and Policies,” a general overview of all applicable legislation, plans and acts that affect bicycle and pedestrian planning is included.

Finally, specific design recommendations should be consistent with the AASHTO Guide for Development of Bicycle Facilities. This guide should also be considered when developing locality specific implementation.

The State Bicycle Policy Plan should serve as the policy framework for any to-be-developed bicycle and pedestrian planning efforts by a locality. The plan is invaluable for the one-stop-shop of state and federal policy for bicycle planning and provides broader goals that should serve as the foundation for local strategies. This plan will help jurisdictions remain consistent with state-wide efforts which would make implementation more likely.

#### VDOT Policy for Integrating Bicycle and Pedestrian Accommodations (2004)

This policy guide provides the framework through which the Virginia Department of Transportation will accommodate bicyclists and pedestrians, including pedestrians with disabilities, along with motorized transportation modes in the planning, funding, design, construction, operation, and maintenance of Virginia's transportation network to achieve a safe, effective, and balanced multimodal transportation system. Specifically, this policy recognizes that:

- *Bicycling and walking are fundamental travel modes and integral components of an efficient transportation network.*
- *Appropriate bicycle and pedestrian accommodations provide the public, including the disabled community, with access to the transportation network; connectivity with other modes of transportation; and independent mobility regardless of age, physical constraints, or income.*
- *Effective bicycle and pedestrian accommodations enhance the quality of life and health, strengthen communities, increase safety for all highway users, reduce congestion, and can benefit the environment.*
- *Bicycling and walking are successfully accommodated when travel by these modes is efficient, safe, and comfortable for the public.*
- *A strategic approach will consistently incorporate the consideration and provision of bicycling and walking accommodations into the decision-making process for Virginia's transportation network.*

The Virginia Department of Transportation (VDOT) states that it will initiate highway construction projects with the *presumption that the projects shall accommodate bicycling and walking*. Factors that support the need to provide bicycle and pedestrian accommodations include, but are not limited to, the following:

- *Project is identified in an adopted transportation or related plan;*
- *Project accommodates existing and future bicycle and pedestrian use;*
- *Project improves or maintains safety for all users;*
- *Project provides a connection to public transportation services and facilities;*
- *Project serves areas or population groups with limited transportation options;*
- *Project provides a connection to bicycling and walking trip generators such as employment, education, retail, recreation, and residential centers and public facilities;*
- *Project is identified in a Safe Routes to School program or provides a connection to a school ;*
- *Project provides a regional connection or is of regional or state significance;*
- *Project provides a link to other bicycle and pedestrian accommodations;*
- *Project provides a connection to traverse natural or man-made barriers; and*
- *Project provides a tourism or economic development opportunity*

VDOT will work with localities to select and design accommodations, taking into consideration community needs, safety, and unique environmental and aesthetic characteristics as they relate to specific projects.

### VDOT Community Trail Development Guide (2012)

This Community Trail Development Guide was published to aid communities in developing processes for grassroots trail planning efforts. Specifically, the guide identifies the following processes:

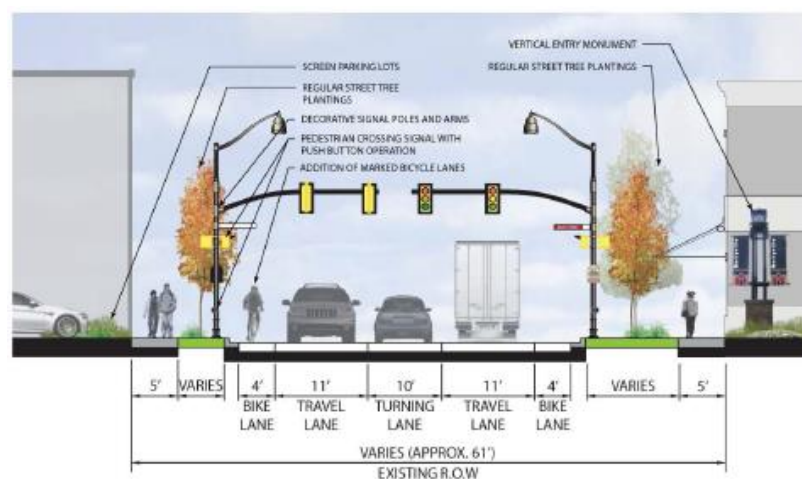
- Create community support and empower local communities early in the process;
- Identify funding options including public-private partnerships;
- Balance state, local, and community perspectives;
- Encourage a broad planning process that includes all stakeholders and community representatives; and
- Identify various trail options.

Should Clarke County and/or Berryville choose to pursue a community based trail development program, this guide should serve as a framework for public participation, plan formulation and implementation.

### VDOT Route 340 Context Sensitive Solutions (CSS) Study (2012)

This purpose of this project, the *Shenandoah Valley Transportation Context Study: An evaluation of Context Sensitive Solutions along Route 340* is a pilot study to further evaluate the application of Context Sensitive Solutions (CSS) procedures, policies and concepts in transportation planning projects along the Route 340 Corridor. Context Sensitive Solutions encompasses many elements and has many definitions, but all focus on improving the balance of safety, mobility, community, and environmental considerations in future projects.

CSS improvements carefully consider *the possible impacts to the natural/scenic environment, the historic resources in the area, and the economic development along the corridor*. This project was initiated by the Virginia Department of Transportation (VDOT), in partnership with the Department of Historic Resources (DHR), in an effort to further the land-use planning projects, transportation planning projects, and the development of entrance corridors and gateways to urban areas along Route 340. The process of applying CSS in future projects is something that VDOT is committed to doing.



Source: VDOT Context Sensitive Solutions Study, Cross-Section View: Main Street & Route 340-Berryville, 2012

Considerations of CSS on multimodal use of the proposed Berryville and Clarke County bicycle and pedestrian facilities should be considered when developing performance and design standards for roadway improvements.

*Walking & Wheeling the Northern Shenandoah Valley (2004)*

General principles and goals that can serve to form a foundation for bicycle and pedestrian planning efforts in Berryville and Clarke County as identified in the Walking & Wheeling the Northern Shenandoah Valley Plan include:

- *Improving overall safety of pedestrians and non-motorized vehicle users;*
- *Increasing the availability and accessibility of alternative transportation;*
- *Conserving the region's resources; and*
- *Encouraging economic vitality.*

The Walking & Wheeling the Northern Shenandoah Valley Plan identifies several key categories for addressing bicycle and pedestrian project goals. This includes:

- *Inventory and Assessment of existing facilities and/or infrastructure related to the goals of the project;*
- *Conceptual Framework to guide planning and prioritization of potential projects;*
- *Design Models to serve as examples of how various types of projects could be addressed; and*
- *Implementation outlining methods of implementing the various projects that may arise out of this study.*



Existing projects identified in the 2004 plan for non-motorized mobility in Berryville and Clarke County includes:

- *The Town and County have completed a bicycle-pedestrian (multimodal) path from on West Main Street, Business Route 7, identified in the 2004 Plan. This Plan serves to connect to the county park and recreation facilities, high school, primary school and fairgrounds.*

The Walking & Wheeling the Northern Shenandoah Valley Plan proposes a “Conceptual Framework” for addressing bicycle and pedestrian planning through: facility design strategies (roadways, sidewalks, bike lanes, etc.), regional projects, town-to-town/town-to-county connections, and local and regional projects.

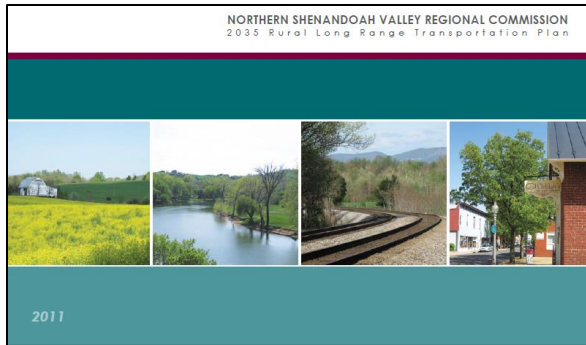
Specific objectives prescribed for Berryville and Clarke County are:

- *Pedestrian and Bicycle improvements;*
- *Route 340 Corridor;*
  - *Addition of wide shoulder for cyclists and other safety improvements*
  - *Identification of historic locations (along and spurring off of Route 340)*

- *Route 7 and Senseny Road Inter-County-Connector Corridor; and*
  - *Addition of wide shoulder for cyclists and other safety improvements*
  - *Identification of historic locations (along and spurring off of Route 7)*
- *Gateway to Northern Virginia/DC Cyclists; connections to W&OD trail system.*

The Walking & Wheeling Plan also provides a specific route analysis by roadway segment. It should be noted that most of the bike routes identified in Berryville and Clarke County are defined as “scenic roads” with “relatively light traffic” or “good roads” with “moderate traffic.” These routes are primarily confined to secondary roadways and avoid primary roads that have higher speeds and traffic volumes (Route 17, Route 50, Route 340, and Route 7). However, this level of analysis does not present a defined bike network with connections between routes. The management team has chosen to use this level-of-service analysis as the basis for planning efforts in 2014.

Northern Shenandoah Valley Rural Long Range Transportation Plan (RLRTP, 2011)



The regional Rural Long Range Transportation Plan (RLRTP) outlines very generally the existing bicycle and pedestrian facilities in the Northern Shenandoah Valley jurisdictions, including Berryville and Clarke County. Under “Goals and Objectives,” the RLRTP states future planning should *encourage the use of alternate modes of transportation to that of single occupancy vehicle for routine trips such as walking, bicycling*. The “Bicycle and Pedestrian Facilities”

section of the plan references the Walking & Wheeling the Northern Shenandoah Valley Plan and notes that *within all of the jurisdictions, bicycle and pedestrian facilities are being encouraged as part of the construction of new roadways, and while updating existing roadways*. This is consistent with VDOT’s Policy for Integrating Bicycle and Pedestrian Accommodations (see summary above).

While addressing bicycle and pedestrian planning, the RLRTP should be utilized to assess project specific sites in existing/proposed roadways. The RLRTP outlines specific recommendations at various sites (intersections, roadway segments) in Clarke County and Berryville.

Town of Berryville Comprehensive Plan (2006)

The Berryville Comprehensive Plan was last updated in 2006 and highlights a number of challenges and recommendations to improve bicycle and pedestrian connectivity in the Town. This includes recognition of significant physical constraints to improve vehicle, bicycle and pedestrian safety in the Town:

*A visual survey of Berryville indicates that several streets in the State and Town systems are too narrow to handle much additional traffic. There is also a lack of definition between the paved portion of many roadways and their shoulders. Hazards are created by the inadequate separation of vehicles and pedestrians. The fact that the paved roadway areas are not well defined may lead to maintenance*

*problems, including erosion of shoulders. In some parts of Town, possible problems are created by the location of buildings very close to the street. These small setbacks, though they help to define the distinctive small-town character of Berryville, can also pose an obstacle if it becomes necessary to widen roads and add sidewalks.*

The Berryville Comprehensive Plan also recommends a bicycle/pedestrian path to the west of Town connecting community assets such as schools, parks and the fairgrounds. This pathway has since been completed and is actively used by residents. The Plan also recommends the extension of a multi-use path along Mosby Boulevard connecting residences to the Clarke County High School campus. An efficient bicycle and pedestrian network is critical to larger community goals such as downtown revitalization and future residential and commercial development (land-use decisions).

#### Safe Routes to School Program (Berryville)

The Town of Berryville has received Safe Routes to School Program (SRTS) funds for project implementation through the Transportation Alternatives (TA) program (2013). Priorities identified in the *Comprehensive School Travel Plan* should inform recommendations for bicycle and pedestrian improvements within the Town of Berryville; especially those linkages to and from Johnson-Williams Middle School. Key corridors identified in the *Comprehensive School Travel Plan* include: Lincoln Ave, West Main Street, South Buckmarsh Street and Swan Avenue.

SRTS is a federally-funded program created under Section 1404 of the 2005 Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). As written into the SAFETEA-LU legislation, the purpose of the SRTS program is to:

- *Enable and encourage children, including those with disabilities, to walk and bicycle to school;*
- *Make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age; and*
- *Facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of schools*



In Virginia, the SRTS Program is administered through the Virginia Department of Transportation (VDOT) but implemented locally.

#### Berryville Area Plan (1992, currently under revision)

The Berryville Area Plan is an ongoing joint planning effort between the Town of Berryville and Clarke County. The purpose of the Berryville Area Plan is to be a guide for the physical long-term growth of the annexation area of the Town of Berryville. The primary focus of the Plan is Annexation Area B, or approximately 880 acres surrounding the 843 acres located in the Town after January 1, 1989 Annexation Agreement. The Berryville Area Plan seeks to encourage development of a *safe, healthful, and distinctive living environment* while maintaining the unique historical features of the community and ensuring preservation and conservation efforts. The timing of development is integral to the growth management



processes outlined in the Berryville Area Plan. The Plan also identifies many factors that could affect the Berryville Area, and this plan specifically focuses on those areas in which the County and Town can have a positive impact through joint planning effort. Specific goals and objects outlined in the plan that pertains to bicycle and pedestrian facilities include:

- *Develop an overall bicycle and pedestrian plan to guide future improvements to such facilities; and*
- *As additional segments are added to the network, consideration should be given to providing additional rights-of-way and/or facilities for bicycles and trails. The design for pedestrians and bicycles shall be incorporated into the design of collector and arterial roadways and intersections.*

Recommendations outlined in the Berryville Area Plan are consistent with recommendations identified in regional planning documents for bicycle and pedestrian facilities.

#### Clarke County Comprehensive Plan (2013)



Clarke County is nearing completion on the 2013 update to the Comprehensive Plan. Like the Town of Berryville Comprehensive Plan and the Berryville Area Plan, the County's Comprehensive Plan identifies long-term planning priorities of the community. Specifically, the plan includes a significant transportation component which stipulates:

*Provision of a safe and efficient transportation network is critical to any community but it is also important to ensure that the community's transportation needs are compatible and coordinated with the land use philosophy. These needs are not limited to public roads but also extend to bicycle, pedestrian, and commuter networks. The Transportation Plan provides a clear statement of how the County's land use philosophy is coordinated with its transportation policies. The Transportation Plan also contains the County's current list of improvement projects along with planning level cost estimates and statistical information to support the need for each project.*

Under the Goals and Objectives section, the County identifies the following objective for bicycle and pedestrian implementation:

- *Ensure that the County's transportation system provides safe and efficient means for all modes of travel for citizens and visitors through coordinated land use decision-making and judicious use of limited fiscal resources; and*
- *Develop and maintain a County bicycle and pedestrian plan.*

Like Berryville, Clarke County has included provisions for the necessity of bicycle and pedestrian amenities as a component of future development decisions.

#### US Bicycle Route Corridor Plan (2012)

The US Bicycle Route System (USBRS) is rapidly developing through partnerships with local, state and regional efforts carried out by governments, volunteers, non-profits and Departments of Transportation



(DOT). This network will be the official US Bicycle Network. The US Bicycle Route Corridor Plan was updated in 2012 with an additional corridor, US Bicycle Route (USBR) 11. USBR 11 will connect five (5) National Parks into a regional bicycle network including: the Chesapeake & Ohio Canal Towpath (C&O Canal), the Bryon Goodloe Bridge (part of the Appalachian Trail), Harpers Ferry National Park, Shenandoah National Park, Skyline Drive and the Blue Ridge Parkway (scenic byways). The proposed USBR 11 will stretch approximately 475 miles from Maryland, through West Virginia, Virginia and terminate in North Carolina. The route is still classified as under development. See USBR 11 Draft Route Map in Appendix B.



This to-be-developed route could serve as a significant tourism and economic development attraction for the Town and County. Berryville and Clarke County staff should closely monitor and/or actively participate in route development.

### Summary of Public Input

Meaningful opportunities for the public to share ideas, voice concerns and have questions answered is critical to effective planning efforts. Public input on the proposed *Berryville & Clarke County Bicycle & Pedestrian Plan* was gathered through two (2) opportunities: an online discussion forum hosted at [www.NSVinfo.org](http://www.NSVinfo.org) and an open house. Public comment was taken between April and May 2014. Below is a summary of public input.

*Please note names have been redacted and comments summarized.*

### **April 2014 Clarke County Board of Supervisors Work Session, Clarke County Planning Commission and Berryville Town Council meetings**

*Staff presented on the draft Plan to the various elected/appointed officials of the Town and County in April 2014.*

- Description of “intersection crossing markings”?
- Purpose of wayfinding signs?
- Clarify reasoning for not including more “off-road” bicycle facilities;
- Look at improvements to Salem Church Road and “T” intersection with Senseny Road;
- Clarify recommendation for “narrow travel lane;”
- Citizen awareness/promotion critical to “acceptance” of bicycle users;
- Clarify everyday rider usage versus larger bicycle events (rallies, etc.); expand bicycle event management section(s);
- Volunteer management for bicycle events; who provides/who coordinates;

- Concern regarding adding paved shoulders and interference with historic stone walls and private property rights;
- Visual “pollution” of more signs (reference to Share the Road signs);
- Clarify that riders are confined to public roads; right of anyone to use the roadway network (motor vehicles, bikes, pedestrians); emphasis on safe use of roads;
- Expanded sections on education/awareness campaigns; rules of the road for cyclist and enforcement of rules by local law enforcement;
- Concerns regarding farm trucks/machinery on the road versus cyclists;
- Bike-App for Clarke County (information and resources);
- Clarify VDOT requirements for signs (Share the Road and/or wayfinding): placement, maintenance, costs;
- Clarify requirements for paved shoulder (2-4 or 2-8 feet);
- Clarify inclusion of cost estimates (not a bill to Town/County to make improvements):
- Promotion of bicycle network as economic development tool; and
- General praise for comprehensive nature of Plan
- Road widening & speed of vehicles?

### Online Public Forum

*An online public forum was available from May 1 to May 31, 2014 for members of the public to review plan documents and maps and leave comment. Fourteen (14) comments were received.*

- *This really seems like a colossal waste of money. As it is, in just the past year we have seen our personal property taxes increase for additional transportation spending, as well as our real estate taxes increased for the School Board's budget. Surely the money required to create bike paths could be better spent elsewhere.*
- *8 million dollars? Are you serious? My gosh, this is a terrible idea. I have lived in CC most of my life and have never heard a friend or neighbor say "gee I wish we had a bike path". Most of my friends and neighbors wish the bikers would migrate to some other county.*
- *Good Work*
- *I think the county is heading in the right direction. Look at what is being done in Page County - they hold multiple bike races a year, that bring in hundreds of cyclists from out of town, eating meals and staying at hotels. Cyclists are drawn to beautiful areas to ride, and a map showing good, safe roads to ride on will help draw people. Having places to go during or after a day's ride will help folks with ride planning. And specifically, providing a good route to get to Purcellville and the W&OD trail*

would be great way to lure cyclists into Clarke from Loudon and points east (you already have a built in pipeline with the W&OD).

- *I do not want my tax money being spent on projects like this. We already have problems in this area with traffic and the last thing we need in this area is more of it, whatever kind it is. I live in Clarke County because I want a slower pace of life and I don't like or want more traffic. For those people that like these type of activities let them move to the counties that already support this type of activity. I am disgusted that people are willing to waste my hard earned money to pay for an activity that less than 1% of the population will use.*
- *Where are the days when we as the citizens of this country used our money wisely? If the county wants to spend our hard earned tax dollars on transportation improvements, than we suggest something of a higher priority such as patching potholes. If people want to come to this county to ride bikes then let them ride our scenic byways on the county roads, freeing up our tax dollars for better use.*
- *I am a Berryville resident with small children (5 & 9) who would like to see improvements to the sidewalks in town. Sometimes we are forced to walk on the side of the road when a sidewalk ends. Creating new sidewalks to prevent walking on the road side would be a great improvement to the community. I am also for having good paths to and from the schools. I also believe that bicyclists contribute to the community in a positive way. I am a former amateur bicycle racer and I own cars, pay taxes and continue to exercise by riding a bicycle. In fact, our entire family rides here in Clarke County. It's healthy and clean fun for us. I also would like it to be safe so that I don't have to worry or stress about getting hit by a car. I've ridden in many communities in Virginia, South Carolina and Hawaii. The last two mentioned states have very good bicycle lanes, in fact South Carolina builds bicycle lanes into new roads and on improved road projects as well. Please keep in mind that not all the proposed improvements here are from tax dollars but also come from various grants.*

*I also love riding through areas like Millwood and do not want to see trees cut, but I'd rather cut trees than loose a life. I rode my bicycle from Berryville to Blue Ridge Mountain Road via Route 7 and there are some areas that do not have enough room for a bicycle to ride on the side of the road such as just before and after the Shenandoah River going East.*

*It is my understanding that tax money is already set aside for normal road repairs and that this proposal is not that dramatic in terms of monies spent. Wouldn't you rather see the safe promotion of healthy ways to travel and exercise for our community? We can make this a great area to leave for our children as well.*

*We have children and neighbors with children on bicycles riding almost every day. I ride myself for health. The Winchester Wheelmen ride in Clarke County every summer at least once a week. There are grants to supplement the proposed projects. I, for one, would like to see that our roads are safe for bicyclist and pedestrian.*

*I would like to see a bicycle rack or two in downtown Berryville. Also, the Bicycle rodeo is good for educating children. Perhaps more than one event during the year, near the beginning of summer*

*when most children will be out riding, walking, and playing. Do we have a town/community bulletin board to advertise these type of events? I never heard about the bicycle rodeo from last year?*

- *As a lifelong Clarke County resident, I'd rather not see more bicycles riding down the road causing traffic issues. They ride down the most dangerous back roads in Clarke County and it drives me insane. Go to Purcellville if you want to ride your bike; they actually have a bike trail! Actually, go back to Loudoun County while your at it!*

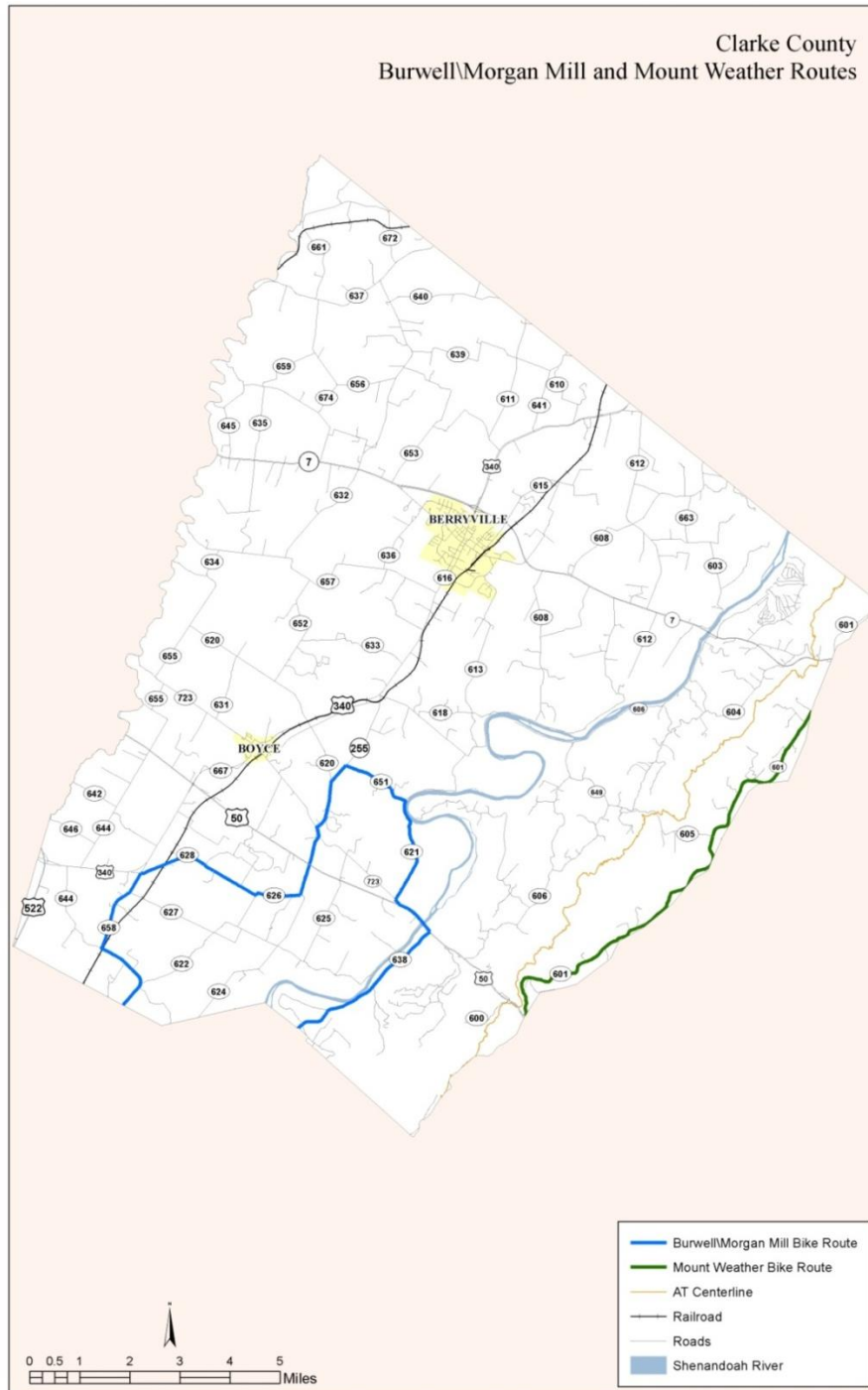
## **Public Input Meeting**

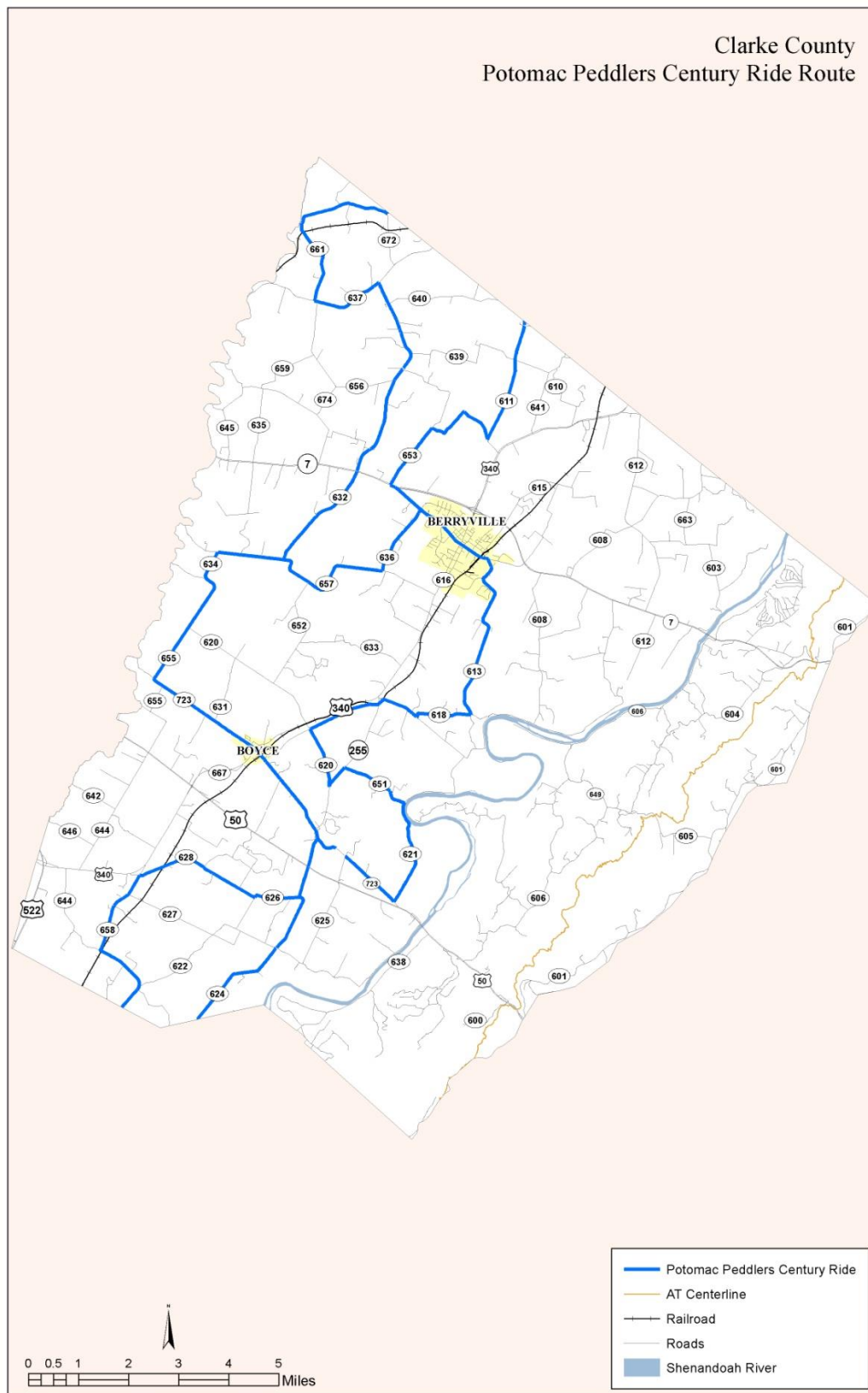
*A public input meeting was held May 15, 2014 at the Clarke County/Berryville Government Center. 16 persons attended.*

- Include numbers of economic benefits of bicycle tourism for Clarke County and Berryville; quantity economic multiplier effect (as applicable);
- Many benefits to bicycle events and tours; word of mouth to bike in Clarke County; international ridership;
- Bikers need to know the “rules” of the road better;
- Bike Virginia is good exposure for County; leads to smaller group rides/return ridership;
- Additional improvement to include: Berryville to Blue Ridge Road along Route 7; ease on/off on shared use trail at Jackson Road;
- Bike racks around Town; centralized bike parking area downtown;
- Clarify paved shoulders and “shoulder wedge;” benefits of paved shoulders to motorists
- Clarify information regarding costs (VDOT Maintenance Program vs. Town/County costs);
- Maintain Town/County character; improvements should be mindful of landscape; natural features and private property
- Clarify impact of recommendation in Millwood village; see specific comments from Millwood Community Association (written comments submitted);
- No changes to historic dirt roads; Plan is great!

## Appendix B: Existing Bike Routes Maps

Note: Existing routes in the Town and County were identified through review of local bicycling club routes/rides (Winchester Wheelmen, Potomac Pedalers and Panhandle Pedalers) and VA bicycling guidebooks.







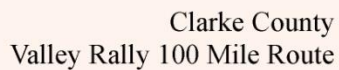
Clarke County  
Rich Rau 30 Mile Route

Map of Clarke County showing the Rich Rau 30 Mile Ride route. The route is marked with a blue line connecting various points of interest, including Berryville and Boyce. The map includes a legend, a scale bar (0 to 5 miles), and a north arrow. The route is marked with numbers 600 through 658. The map also shows roads, railroads, and the Shenandoah River.

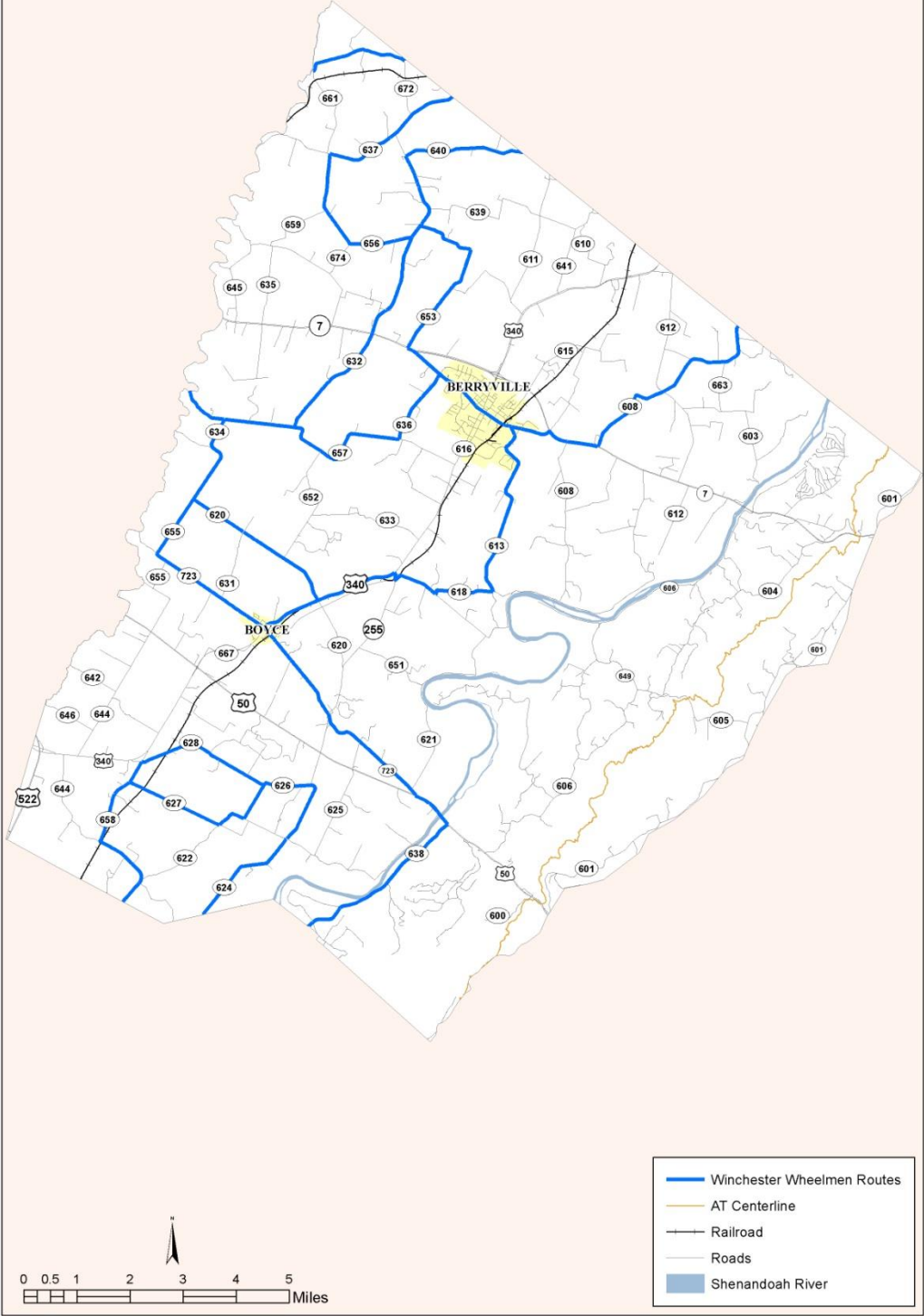
Legend:

- Rich Rau 30 Mile Ride
- AT Centerline
- Railroad
- Roads
- Shenandoah River

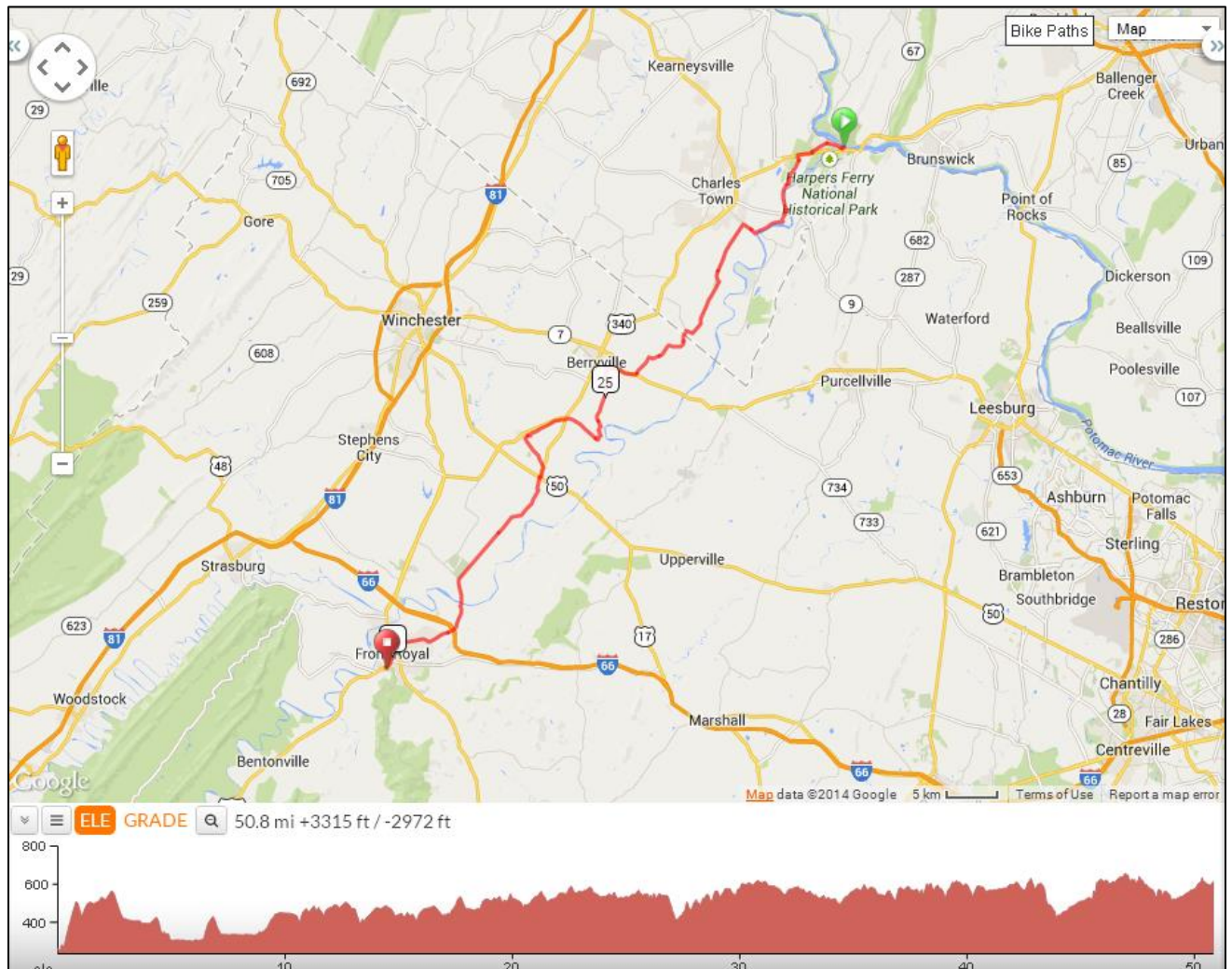
## Town of Berryville & Clarke County: Bicycle & Pedestrian Plan



Clarke County  
Winchester Wheelmen Routes



### US Bicycle Route 11-Draft Route (2014)



Source: US Bicycle Route 11 Draft Route, American Bicycling Federation; available from: [www.ridewithgps.com](http://www.ridewithgps.com), 2014



## *Appendix C: Best Practices for Bicycle Event Management*

Not all bicycling events are alike. Bicycling events may be organized for recreation, competition, or both; and may vary widely in number and skill of participants, and in duration.

Organized **group recreational rides** are run on routes which typically remain open to motor vehicle traffic. Such rides include

- small **weekly club rides** often with fewer than a dozen participants and no advance registration (such as those organized by the Winchester Wheelmen bicycle club). Such informal rides typically assemble at a public or private parking lot at a pre-determined time (often evenings and weekends) and follow a pre-planned route.
- **multi-day tours** run by private tour operators with support vehicles, where participants book a tour package well in advance. Such groups are relatively small, and stay in commercial lodging (motels and bed and breakfasts).
- **cycling weekends** organized typically by bicycle clubs which may reserve a block of motel rooms for a weekend; registrants participate in their choice of daily planned local loop rides. Riders typically number in the dozens, and generally are of more advanced cycling ability. Example: Potomac Pedalers Touring Club's Shenandoah Bike Weekend held in June.
- single or multi-day **charity rides**. Such rides may attract thousands of participants with a wide range of ages and cycling skills and abilities. Typically run by large charitable organizations, these events are intended to raise funds from participants for a cause, most typically for medical research and patient support services. Charity rides require a large starting/ending area with plenty of parking; and will also include rest stops providing food and drink, and toilet facilities. Examples: Bike MS Ride the Riverside (Washington DC area) and Ride Virginia (Richmond to Williamsburg and back).
- **large single-day club rides**. Organized by bicycle clubs, these are typically scheduled well in advance (up to a year), and are annual events requiring pre-registration. They are longer – up to 100 miles or more – and frequently include several shorter options. As with most recreational rides, riders follow a “cue sheet” of turn-by-turn directions; routes are also often marked with small, inconspicuous symbols painted on the roadway. Attracting hundreds and sometimes thousands of cycling enthusiasts, these rides require a large staging area with plenty of parking; and will also include rest stops providing food and drink, and toilet facilities. Clarke County hosts the Potomac Pedalers Touring Club's annual Back Roads Century ride (<http://www.backroadscentury.org>) in late September. For the past several years this event, billed as “one of the premier cycling events in the mid-Atlantic region, and is also considered one of the most beautiful rides in America,” has sold to capacity, 2,300 riders and volunteers.
- the **Bike Virginia Tour**, an annual six-day cycling “festival” in its 27<sup>th</sup> year, attracting more than a thousand riders, organized by the non-profit Bike Virginia to promote bicycling and tourism in the state. The tour varies in location from year to year, and offers riders a variety of route options. Riders must pre-register.
- **Open Streets** events, sometimes called “ciclovias,” are increasingly popular day-long events during which a route or street (typically in a downtown area) is closed to traffic to allow recreational activity in the street, including walking, running, skating and bicycling, by the public with no registration required. Ciclovias are usually run by local government.

**Competitive events** are races involving amateur or professional athletes. Races may be run on a short loop with many laps (called a “criterium” race) or on longer routes with many riders on the road at once, often in a large pack (a “peloton”) and sometimes spread out over a considerable distance; or one rider on the course at a time, racing against the clock (called a “time trial”). These events are intended to draw spectators along the route, which in all instances is closed to general traffic for the duration of the race (rider/team support vehicles may be allowed on the route during the race). Races are typically scheduled and run by USA Cycling (the sport’s governing body) and are sometimes promoted by local governments to generate tourism by attracting spectators.

**“Grand Fondos”** are large, one-day long distance events similar to large club rides except that times are recorded for riders, encouraging some to view it as a race, although the majority of participants may not be competitive athletes. Routes remain open to motor vehicle traffic. No Grand Fondo events are currently scheduled for Clarke County.

Few localities explicitly regulate large bicycling events, and there are no known ordinances or statutes requiring permits for the use of public roads by bicycling events of any size, so long as the route is not closed to traffic. Bike Virginia, operating one of the state’s largest multi-day events for 27 years, has never been required by VDOT or a locality to apply for permits for the riding portion of the event. Required permits are those associated with the use of public facilities such as schools and parks as venues for rest stops, meals, and camping, which also typically requires permits from the health district (Email correspondence with Dr. Kim Perry, Executive Director, Bike Virginia, 7/16/14).

Only one ordinance was discovered in an on-line search. Iowa County, Wisconsin, recently enacted an ordinance regulating bike rides with 100 or more participants. Organizers must apply for a permit addressing event duration, parking and access, sanitary facilities, rest stations, refuse removal, severe weather notification, notification of highway department offices, identification of participants, security, barricades, signage, traffic control, course markings, flagging personnel, compliance with other code provisions, compliance with regulations on all levels and extra-ordinary services (requiring such services to be paid for by ride organizers). Drafted with input from the Wisconsin Bicycle Federation, the ordinance will automatically expire on March 1<sup>st</sup>, 2015, allowing the county and stakeholders to assess its effectiveness ([www.channel3000.com/news/ordinance-in-iowa-county-may-impact-bike-events/25003154](http://www.channel3000.com/news/ordinance-in-iowa-county-may-impact-bike-events/25003154) accessed 7/14/14).

The League of American Bicyclists provides an on-line clearinghouse for its member clubs to post their group ride management practices and safety materials; and provides group liability insurance coverage for clubs. However, there is no standard “best practices” guidance for ride organizers.

The minimization of adverse local impacts by large bicycling events relies largely upon voluntary cooperation and coordination between ride organizers and local officials. Bike Virginia, for example, voluntarily submits its route plans to VDOT (which reviews it for potential conflicts such as planned construction activity) and to local law enforcement and EMS; and has paid to rent VDOT signage and for law enforcement personnel to work at hazardous intersections (Email correspondence with Dr. Kim Perry, Executive Director, Bike Virginia, 7/16/14).

To keep riders on course, Bike Virginia posts temporary directional signs which are promptly removed at the end of the day. Volunteer “route monitors” warn riders of dangerous conditions and behaviors.

To encourage participants to comply with the rules of the road and norms of good behavior, the Potomac Pedalers posts Virginia’s bicycling laws on its Back Roads Century website, and (in response to concerns voiced by Berryville and Clarke County officials and residents) requires registrants to read and acknowledge its Rider Behavior Policy ([www.backroadscentury.org/resources/riderbehaviorpolicy](http://www.backroadscentury.org/resources/riderbehaviorpolicy)).



Volunteers are recruited from among the club's experienced group ride leaders to maintain cohesive groups of riders and to promote safety during the ride.

In general, organizers of large events should

- Check routes well in advance for hazards
- Provide first-aid facilities
- Coordinate with local officials including law enforcement regarding traffic control and motorist information (in advance and on day of event).
- Recruit and train ride marshals/route monitors to keep riders on route, encourage safe riding and to provide first response to incidents
- Provide information to participants on rules of the road, traffic etiquette and safe riding
- Provide comfort facilities
- Ensure that the routes and staging areas are left as they were found.

Motorists do not like to be surprised: drivers should be informed about the event well in advance through print, broadcast, electronic and social media; and, closer to the event date, through portable variable message signs so that they know what to expect, and may plan their travel accordingly.

#### *Appendix D: Bicycle Safety Tips*

Bicycles are subject to the same laws as motor vehicles. Riders of all ages should use the following tips to help ensure safe and legal bike operation (from VA Department of Motor Vehicles, 2014):

- Ride with traffic.
- Stop and look both ways before entering the street.
- If you are a new or inexperienced rider, it's a good idea to stop at all intersections.
- Before turning, use hand signals and look all ways.
- Be a responsible bicyclist - obey all traffic control devices and use proper hand signals.
- Ride defensively - anticipate the actions of other road users and watch for road hazards.
- Pass vehicles with extreme care - turning vehicles may not see you.
- Be aware of motor vehicle blind spots while riding or when stopped at an intersection.
- Walk your bicycle when you get into traffic situations beyond your cycling abilities.
- Park your bicycle so you do not block sidewalks, disabled accesses, building accesses, or emergency drives.

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